FORESTRY ABSTRACTS

VOLUME 29 1968

ANNUAL INDEXES

		Page
1.	Authors - - - - - - -	785
2.	Tree species - - - - - -	826
3.	Diseases and invertebrate pests - - -	855
4.	Subject - - - - - - -	860
5.	Geographical - - - - - -	911

The reference number refers to the serial number of the abstract, which is given at the *head* of the title.

Reference numbers with "p." prefixed refer to page numbers.

The Editor would be glad to have any errors brought to his notice.

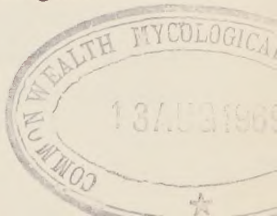
Prepared by

COMMONWEALTH FORESTRY BUREAU, OXFORD

Published Annually by

Commonwealth Agricultural Bureaux, Farnham Royal, England

© *Commonwealth Agricultural Bureaux, 1969*



Digitized by the Internet Archive
in 2025

https://archive.org/details/forestry-abstracts_1968_29_index

AUTHORS INDEX

Aaron, J.R. 6232
Aaseth, A.L. 6100
Abaturov, B D., and Bjazrova, E.A. 57
Abaturov, Ju.D. 2058
Abbate, M.L.E. 3099
Abdelnour, H.O. 6174
Abdurachim M., R.A. 1369, 1371
Abe, H. see Hirata, T.
Abe, I., and Kubota, M. 1398
Abe, T. see Morisawa, M.
Abeels, P. 3008-10
Abetz, P. 614, 2305-6
Abramovitch, R.A., and Koleoso, O.A. 1358
Abrarov, I.S. 5746
Abražko, V.I. 5301
Abreu y Pidal, J.M. de 6777
Abt, E. 6217
Ach, E.E. see McNab, W.H.
Acharya, D.P. see Mokashi, V.K.
Achaya, T. 5429
Acheson, E.D., Hadfield, E.H., and MacBeth, R.G. 1363
Achterberg, W. see Rafalski, H.J.
— see Wagenknecht, E.
Ackerman, R.F. 409, 2244
Adams, D.H., and Roth, L.W. 5842
Adams, M.F. see Ettling, B.V.
— see Raff, R.A.V.
Adams, M.H. see Merritt, C.
Adams, R.E. see Sutherland, J.R.
Adams, R.S., and Eden, C.J. 5567
— Gossard, S.T., and Ritchey, J.R. 3820, 5609
Adams, S.F. see Maiti, M.
— see Mark, R.E.
Adams, T.C. 2389, 6227
Adema, K. 3831
Adeoye, I., et al. 6174
Adesida, G.A., and Taylor, D.A.H. 5078
Adesogan, E.K., Powell, J.W., and Taylor, D.A.H. 1653
— and Taylor, D.A.H. 3164
Adomat, R. 6172
Adorján, J. 5262
Affeltranger, C.E. 6574
— and Neel, W.W. 3103
Afonina, V.V. see Lebedeva, N.V.
Agamirova, M.I. 2141, 2199
Agarwal, P.N. see Khalsa, H.G.
Agarwal, S.K. see Masani, N.J.
Agarwala, V.P., and Datta, R.C. 5723
— and Singh, R.V. 6242
Ageenko, A.S., and Lebedinskij, V.V. 2788
Ageenkova, L.V. see Efimenko, O.M.
Agekjan, N.G. 5947
Ager, B. 2377
Agnihorti, V.P., and Vaartaja, O. 4086
— see Vaartaja, O.
Agostini, R. 4860
Ahlén, L., and Göransson, S. 4805
Ahlgren, C.E. 2237
Ahmerov, A.M. 4371
Aho, V. 1488
Ahrens, J.F. 3722
Ahromejko, A.I. 5280
Ahsan, S.W. see Peachey, J.E.
Aiba, Y., and Hasebe, H. 5528
— Kawana, A., and Haibara, K. 3267
Aicher, R. 1189
Aichinger, E. 3293, 4976
Ainsworth, G.C., and Sussman, A.S. 3448, 5196
Aiyanyo, I. see Kay, J.A.
Ajayi, D.S. see Lucas, E.B.
Ajzenberg, A.I., and Usanov, Ju.N. 5681
Akasi, T. 2227
Åkesson, H. see Hedbring, O.
Akimovski, R. 2841
Akutsu, K. see Hukuhara, T.
Alban, D.H. 3551
Al'benskij, A.V. 6781
— and Nikitin, P.D. 2323
Albersheim, P. see McNab, J.M.
Albert, E. 639
Albert, T.J., and Johnson, J.W. 3014
Alcaniz, R. see Halls, L.K.
Aldhous, J.R. 502, 552, 813, 2476-7, 2480
— and Hendrie, R. 817
Aldon, E.F. 5004
Aldred, A.H., and Blake, G.R. 2796
— and Kippen, F.W. 2798, 4411
— and Sayn-Wittgenstein, L. 4412
Aldred, F.C. 4789
Aldrich, R.C. 4410
— and Drooz, A.T. 1154
Aleksandrov, A. 2930, 5154, 5324
Aleksandrovič, V.E. 2024
Alekseev, V.I. see Smirnov, V.V.
Alekseeva, A.I. 2879-80
Alelekova, V.V. 825
Alemdağ, Ş. 1081, 4380, 6190
Alendorf, E.V. 4663
Alexander, D.M. see Maggs, D.H.
Alexander, R.R. 4003, 4355, 5437
— Tackle, D., and Dahms, W.G. 1111
Alexander, T.R. 3642
Alexandris [Alexandrēs], S. 3288
Alexandru, S., Dogaru, V., and Tudor, E. 4626
Alexe, A. 6200
Algvere, K.V. 2836
— see Stridsberg, E.
Ali, S.I. 5228
Allan, G.G. see Sarkanen, K.V.
Allegri, E. 5406
Allen, E.K., and Allen, O.N. 5286
Allen, I.V.F. see Walden, C.C.
Allen, M.W., and Sher, S.A. 2475
Allen, O.N. see Allen, E.K.
— see Gilmour, C.M.
Allen, R.M. 536
Allessio, M.L., and Rowley, J.R. 18
Alley, J.R. see Green, A.W.
— see Wikstrom, J.H.
Allison, J.H. see Sucoff, E.I.
Alonso, O.C., Mutarelli, E.J., and Orfila, E.N. 5413
— see Mutarelli, E.J.
Alonso, R.C. 5304
Alonzo A.E. 1716
— and Sancho R. 465, 5571
Alpatkina, R.P. 2945
al-Sahine F. 4861
Alston, A.S. 6259, 6589, 6611, 6621
Alsups, I.A. see Kul'kevic, A.Ja.
Altuhov, V.F. 1425
Alvarenga, R. de Mello 1666
Alvarez, J. 51
Alves, A.A. Monteiro 4427
Alvim, P. de T. see Zevallos, A.C.
Amana, E.J., and Booth, L.G. 6522
Amante, E. 1064
Amemiya, S., and Inoue, M. 1481
Amidon, E.L., see McConnen, R.J.
Amman, G.D. 932, 4190
Ammer, U., and Weiss, H. 2383
— see Liese, W.
Amos, R.E., and True, R.P. 2532
Amosov, G.A. 784
Amrik, L., and Zombori, J. 3147
An, P.A. see Gringof, I.G.
Anciferov, G.I. see Mironov, V.V.
Andersen, P. 3405
Anderson, A.B. 1568
— see Riffer, R.
Anderson, C.B. see Wayman, M.
Anderson, D.G. see Porter, J.W.
Anderson, F.K. see Treshow, M.
Anderson, G.W., and Anderson, R.L. 5870
Anderson, H.W. 2584
Anderson, L.D., and Atkins, E.L., Jr. 3324
Anderson, M.L. 1654
Anderson, N.A., French, D.W., and Anderson, R.L. 871
Anderson, N.H. 6022
Anderson, R., and Mori, S. 376
Anderson, R.L. see Anderson, G.W.
— see Anderson, N.A.
— see French, D.W.
Anderson, W.C. 2822
Andersson, B. 2426, 5759
Andersson, K.O. 1717
Andersson, O. 5695
Andersson, S. 5643
Andersson, S.-O. 6201
Andonov, A.D. 1160, 6166
Andonovski, A. 1933
André, P. 1604-7
Andreev, V.V. see Solov'ev, S.A.
Andrei, S. see Tănăsescu, S.
Andreuccetti, E. 5734
Andrews, S.R. see Lightle, P.C.
Androić, M. 2594, 5754
Angelov, Z., et al. 2859
Anić, M. 1950
Anikaev, V.A. see Bujlov, D.A.
Anisimov, A.I. 6781
Ansell, A.D., and Nair, N.B. 3100
Antanajtis, V. 6073
Antoine, R. see Devillez, F.
Anton, A. see Huddleston, E.B.
Antończyk, S. see Solik, J.
Anučin, N.P. 4311, 4423, 6073, 6781
Anučin, P.I., and Firsov, A.I. 3153
— see Mihaljuk, G.F.
Anuwongse, B. see Bavendamm, W.
Aoyama, T. 1383
Appelroth, S.E. 2260
Aramoto, M. 5628
— and Inoue, Y. 5628
Arasu, N.T. 5150
Arbez, M. 2160
Arbonnier, P. 819, 4451
Ardikusumah, R.I. see Sudiono, J.
Arend, J.L. 626, 2487
Arens, K. see Camargo, P. Nogueira de
Arima, T. 1312
Arkwright, P. 1212, 2863, 4492, 6253

Arman, V. 1097
— and Jakobsons, A. 1091
Armăşescu, S. 1080
— et al. 2689
Armitage, I. P. see Leyton, L.
Armson, K. A. 593
Armstrong, W. 5091
Arni, P. C. see Gray, J. D.
Arnold, J. E. M. 2846, 4467
Arnold, K.-H. 3320
Arnold, L. E. see Boggess, W. R.
Arnold, M. K. see Heath, G. W.
Arnold, R. H. 4137
Arnold, R. K. 2444
— and Hopkins, W. S. 3200
Arnott, J. T. 5434
— and Leaf, A. L. 4057
Aro, P. 4952
Arora, R. K. 3635, 5380-1
Aróstegui, A. see Yavorsky, J.
Arreghini, R. I. see Burgos, J. C.
Arrighetti, A. 396
Arru, G. M. 2598, 6000
— Covassi, M., and Bellis, E. de 2593
Arschanov, B. 5465
Arsdel, E. P. van 4141, 5882
Arsenescu, M. 916
Artamonov, Ju. G., Orlov, S. F., and Pomogaev, S. A. 676, 680, 724
— et al. 681
Arthur, H. R., Loo, S. N., and Lamberton, J. A. 1638
Arvanitis, L. G., and O'Regan, W. G. 2723
Arvesen, A. 3931
Arvidson, B. 4409
Arya, R. S. see Venkatesh, C. S.
Arzee, T., Lipshchitz, N., and Waisel, Y. 6302
— see Waisel, Y.
Asakawa, S. see el Dabh, R. S.
Asano, S. 1397
Asanova, V. K. 5240
Ashby, K. R. 889
Ashby W. C. 252
— and Baker, M. B., Jr. 5587
— et al. 85
Asher, R. L. 2373
Asher, W. C. 3387
Ashhurst, D. E. 3324
Ashton, P. S. 3633, 5218
Aşk, K. see Aydemir, H.
Asparuhov, K. see Marinov, T.
— see Statkov, N.
Assarsson, A. 6674
Assche, J. van, and Schoenenberger, A. 295
Assmann, E. 6172
Asterēs, K. (Asteris, C.) 2738
— see Geōrgopulos, A.
Asthana, M. N. 2365
— and Bhatia, D. N. 5687
— see Singh, S. N.
Astous, R. d'. see Hubbes, M.
Åstrand, H. see Wachtmeister, H.
Atal, C. K. see Kapur, K. K.
Atallah, S. 783
Atanasoff [Atanasov], D. 881
Atkins, E. L., Jr. see Anderson, L. D.
Atkins, M. D. 1021
— see Woods, T. A. D.
Atkinson, M. R., et al. 110
Atmawidjaja, R. 4318
Atrohin, V. G., and Korotkov, A. M. 612
Atterson, J., and Davies, E. J. M. 2280
Attims, Y., and Cremers, G. 3575
Attiwill, P. M. 4997
— and Ovington, J. D. 5326
Aubréville, A. 227, 347-8, 3493
Aufsess, H. von, Pechmann, H. von, and Graessle, E. 6595
Aulitzky, H. 4011
Aussenac, G. 5760
Austin, M. P. see Greig-Smith, P.
Avanzo, E. 1864, 2169
Averina, G. A. see Mankevič, L. A.
Avery, T. E. 6074, 6168
— and Burkhart, H. 2795
Aveyard, J. M. 5512
Axelsson, S.-Å. 2393, 3950
Axelton, E. A. 3469
Aydemir, H. 3321
— and Aşk, K. 3844
Aytuğ, B. 3393, 3612
Azuaje, C. 6843
Babeu, R. G. see MacConnell, W. P.
Babicki, R., and Krzoska, Z. 6734
— Siwek, K., and Jarzembowski, R. 3938
Babu, R. see Gupta, S. K.
Bach, L. 4541, 6371
— and Pentoney, R. E. 6361
— and Rovner, B. 2963
Bachelard, E. P. 5511
— and Boughton, V. H. 4059
Bachmann, P. 2824
Baciu, A. 706
Back, E. 6674
Backer, L. W. de, and Boersma, L. 1961
Backhouse, G. W. see Payne, S. R.
Backmund, F. 6216
Backus, M. P. see Gochenaur, S. E.
Badan, R. 4322
Badanova, K. A., and Vartapetjan, B. B. 5122
Badea, M. 337
Badjun [Baḍun], S. 1288, 1296
Badurowa, M., and Badura, L. 5025
Baechler, R. H. see Gjovik, L. R.
— see Vick, C. B.
Bagaev, A. N. 6736
Bagaev, S. N. 176
Baggaley, K. H., et al. 4584
Bagley, W. T. see Read, R. A.
Bailey, F. see Hartge, K. H.
Bailey, V. J. 4614
Bain, R. B. see Phillips, F. H.
Bair, J. G. see Moslemi, A. A.
Bajaj, A. N. see Masani, N. J.
Bajdalina, N. A., and Malyševa, O. N. 2898
Bajkowski, J. 1380, 4619
Bajzak, D. see Nickerson, D. E.
Baker, B. H. see Torgersen, T. R.
Baker, E. F. 139
Baker, G. 1298
Baker, G. O., Jr. 4428
Baker, J. 3260
— and Norris, D. M. 4269
— et al. 6032
— see Gilbert, B. L.
— see Norris, D. M.
Baker, J. M. and Taylor, J. M. 3055, 4700
Baker, M. B., Jr. see Ashby, W. C.
Baker, R. D. 2793, 4405
Bakiev, R. Š. 1391
Bakke, A. 4253
Bakos, Z. 158
Bąkowski, S. see Szostak, M.
Baksa, L. 414
Bakshi, B. K. 2499
— and Singh, S. 2500
— and Thapar, H. S. 3559-60
— see Sehgal, H. S.
Bakulin, V. T. 189
Bakuzis, E. V. 2100
Bălănescu, E., Copăceanu, D., and Ivănescu, D. 2364
Balatinecz, J. J. 4476, 4523
— and Kennedy, R. V. 2904
Bałazy, S., and Kiełczewski, B. 4266
— see Kiełczewski, B.
Baldwin, C. W. 1464
Baldwin, E. 2282
Baldwin, H. I. 2165
Baldy, C., and Marion, J. 639
Balgooy, M. M. J. van see Steenis, C. G. G. J. van
Bálint, G. 6549
— et al. 6555
Balman, F. E. 1718, 2823
Balobeško, V. S. 5954
Balodis, V. 6669
Baltaxe, R. 4955
Baltensweiler, W. 5959
Bamps, P. 215
Bamps, R., and Farron, C. 3459
Bampton, S. S., Butterworth, D., and MacNulty, B. J. 1529
Banage, W. B., and Visser, S. A. 47
Bańdjukova, V. A. 5080
Bandt, W. 5720
— see Landbeck, H.
Banerjee, S., and Purkayastha, R. P. 1518
Banfi, A. 1716
Banks, C. H. see Bosman, D. L.
Banks, W. B. 6326
Bannan, M. W. 1237, 4513
Bánó, I. 2179
— and Retkes, J. 1867
Bará Temes, S. 2289
Barabin, A. I. 136, 5486
Barabits, E. 3688
Baradat, P. 2036
Barannikov, L. F. 726-7
— et al. 473
Baranov, A. I., Vtorova, V. F., and Salminen, E. O. 746
— et al. 5751
Baranova, V. P. 5314
Baranyay, J. A. 4135
— see Whitney, H. S.
Barbadillo Gomez, P. 1579, 1581, 3137
Barber, J. C. 172
— and Dorman, K. W. 3401
Barber, W. M. see Foley, T. A.
Barbina, A. 1689
Barbour, J. F. see Caster, K. L.
Barčukova, M. V. 2905
Bard, G. E. 3641
Bard, J. see Pomerleau, R.
Barderi, C. H. 1716
Bardyšev, I. I., Bazyl'čik, V. V., and Čudinov, S. V. 1647
— Kulikov, V. I., and Percovskij, A. L. 3171

Barefoot, A. C. see Namkoong, G.
— see Salehuddin, A. B. M.
— see Wooton, T. E.
Barger, R. L. 1567
— see Ffolliott, P. F.
Barghoorn, A. W., and Renteira R., M. 2869
Bariska, M. see Bosshard, H. E.
Barker, H. 5131
Barkley, F. A. 5217
Barna, M. M. 3389
Barnacle, J. E., and Christensen, F. J. 6498
— Christensen, F. J., and Cuevas, L. E. 3110
— see Christensen, F. J.
Barnes, B. V. 188, 3418
Barnett, J. P., and McLemore, B. F. 483, 488, 491
— see McLemore, B. F.
Barney, B. J. 2450
Barnholden, G. 6496
Baron, F. J. 3592
Barraclough, J. W. 720
Barradas, M. J. da M. Antunes 6206
Barras, S. J. see Gilbert, B. L.
Barratt, B. C. 5283
Barreto, L. Soares 4487
Barrett, W. H. G. 1716
— see Golfari, L.
— see Picchi, C. G.
— see Wright, J. W.
Bärring, U. 3806
Barros, D. Paes de 417, 1487
Bartelheimer, P. see Speer, J.
Bartel-Kornacka, E. T. 1360
Bartels, H. 317, 1833
Bartkowiak, A. see Białobok, S.
Barton, G. M. 850, 4576, 5848
Barton, W. J. 6074
Barton, W. W. 6074
Bartoo, R. A. see Kinsley, L. S.
Barucha, M.-O. 3939, 5401
Barz, E. 2994, 4629, 6434
Basaraba, J. see Benoit, R. E.
Basham, J. T. 2509-10
— and Taylor, L. D. 2511
Baškin, A. P. 5483
Bassett, C., and Zondag, R. 4078
— et al. 2517
Bassett, I. J., and Crompton, C. W. 3249
Bassett, J. R., and Beene, J. T. 6134
Bassett, K. see Nearn, W. T.
Bassus, W. 3303, 5778
Batchelder, R. W. 4033
Bateman, B. A., and Roark, C. B. 2129
Batini, F. E. see Podger, F. D.
Batzer, H. O. 5962-3
Bauch, J., and Liese, W. 2917
— Liese, W., and Eckstein, D. 2771
— see Liese, W.
Baudín Sánchez, F. 477, 4252
Baudyš, E. 5755
Bauer, A. 517
Bauer, E. 3185
Bauger, E. 4353
Baum, B. see Horowitz, A.
Baumgartner, A. 17
Baur, G. N. 3647
Baurant, R., and Seutin, E. 933
— see Seutin, E.
Bavendamm, W., and Anuwongse, B. 6587
Baxter, J. G. see Bolker, H. I.
Bay, R. R. 1786, 5040
Bayer, D. E. see Leonard, O. A.
— see Lund-Høie, K.
Ba lis, G. T. S. 289
Bayoğlu, S. 3987, 3990
Bazán de Segura, C. 1068, 4084
— and González F., V. 4085
Baženov, V. A. see Varaksina, T. N.
Bazilevič, N. I. 3601
Bazyl'čik, V. V. see Bardyšev, I. I.
Beagley, J. K. see Oshima, N.
Beak, P. G. 3216
Beal, R. H. 954, 3104
Beall, F. C. 4540
Beall, H. W. 4038
— see Wright, J. G.
Beals, E. W. 374
Beard, J. S. 381
Bearns, E. R. 195
Beaver, R. A. 1037, 2669-71, 4270-1
Beck, T. V. 5608
Becker, G. 1533, 4696, 4750, 6546
— and Kaune, P. 1507, 4695
— and Starfinger, K. 6544
Becker, G. C., and Benjamin, D. M. 1052
Becker, H. 2962, 6622
Becker, M. 1206, 6219
Becking, J. H. 1995, 6176
Beckman, C. H. see Brener, W. D.
Beckman, K. M., and Roth, L. F. 5808
Bedard, W. D. see Tate, N. L.
Bedenko, V. F., and Cybukov, V. N. 654
— see Dročnev, Ja. G.
Bednall, B. H. 3552
— et al. 3662
Bednarek, A. 1743
Bedrikovskaja, N. P., and Karakis, K. D. 277
Beene, J. T. see Bassett, J. R.
Beers, T. W. 6109
Beesley, J. 1489
Bega, R. V., and Smith, R. S., Jr. 845
Behlen, W. 1009
Behr, E. A. 1485
— et al. 1417
Beichelt, F. 6111
Beidleman, R. G. 5342
Beineke, W. F. 1897
Beisel, G., Nielsen, U., and Sauter, J. J. 1074
Bejer-Petersen, B. 930, 5936
Beland, J. W., and Jones, L. 5119
Belcher, E. W., Jr., and Darby, S. P. 757
— and Neel, W. W. 3753
— see Neel, W. W.
Beldie, A. 194
Belenkov, D. A. 1473
Belicová, J. 284
Beljaev, Ju. A. see Nahabcev, I. A.
Beljakov, P. see Nedjalkov, S.
Bell, D. K., and Haasis, F. A. 4119
Bell, J. C., Jr. see Ciesla, W. M.
Bell, W. R., and Fergus, C. L. 4129
Bella, I. E. 4297
— and Jarvis, J. M. 2758
Belli, G. 3511
Bellis, E. de, and Cavalcaselle, B. 4204, 4234, 6005
— see Arru, G. M.
— see Cavalcaselle, B.
Bellmann, E. see Schönbach, H.
Bello, E. D. 6318
Bellon, S. 2170
Belous, A. P. see Kozlovskaja, L. S.
Belous, V. I. 2239
Belova, K. V. see Smirnov, V. N.
Beltz, R. C., and Christopher, J. F. 6821
Benčat', F. 3399
Benche, V. see Filipescu, G.
Bender, F. 1646
Bendz, M. 3233
— and Yttermyr, B. 3232
Benea, V. see Enescu, V.
Benecke, U. 3901
Bengtson, G. W., and Goddard, R. E. 2196
— McGregor, W. H. D., and Squillace, A. E. 3420
— see Varnell, R. J.
Benička, J. see Miller, D. G.
Benjamin, D. M. see Becker, G. C.
— see Hanson, J. B.
Bennett, C. R., and Cambie, R. C. 4585
Bennett, C. W. 2475
Bennett, F. A. 6074
Bennett, F. D., and Rao, V. P. 5796
— see Rao, V. P.
Bennett, R. D. see Heftmann, E.
Bennett, W. H. 999
Benoit, R. E., Starkey, R. L., and Basaraba, J. 5019
Benson, L., et al. 1901
Benson, M. K., and Einspahr, D. W. 462
— see Einspahr, D. W.
Benson, M. L., and Sims, W. G. 6169
— see Sims, W. G.
Benson, R. E., and Kirkwold, L. L. 1197
Benzian, B. 509-10
— and Freeman, S. C. R. 3763
Bérard, J. A. 3984
Berben, J. C. 1998, 5299
Berezin, A. M., Vavilov, E. I., and Grigor'ev, A. A. 2805
Bereziuc, R., Mihăilescu, M., and Opriţa, V. 2414
Berg, L. V. see Korablev, A. I.
Berg, R. A. van den, and Ryke, P. A. J. 49
Bergan, J. 2266, 3589
Bergin, E. G. see Carroll, M. N.
Berglund, J. V. see Marion, G. M.
Bergman, J., and Rennel, J. 4788
Bergman, O., and Nilsson, T. 1552
Bergmann, J.-H. 3848, 5401, 5605
Bergthórsson, P., and Ragnarsson, H. 3256
Berhaut, J. 3458
Beriašvili, I. V. 3212
Berisford, C. W., and Kulman, H. M. 4211
Berlyn, G. P. 2043, 6332
Berman, K. V. 6239
Bernadzki, E. 3667
Bernal Redondo, R. M. 4268
Bernard, J. M. 3484
Bernhard, J., and Cernusca, G. 3254
Bernier, G. A., and Kline, D. E. 6575
Berntsen, C. M. 3523
Beroza, M. 984
Berry, A. B. see Stiell, W. M.
Berry, R. E., and Raney, L. W. 4981
Berry, W. L., and Thomson, W. W. 5273
Berry, W. S., and Wiant, H. V., Jr. 2716
Berryman, A. A. 6034
Beršadskij, A. L. 4612
Berton, A., and Chararas, C. 6029
— see Chararas, C.

Berzaghi, C. 1650
Beşçeli, O. 4262
Best, C. W. 6496
Bestemjannikov, Ju. V. see Dročnev, Ja. G.
Bester, H., and Klier, G. 4349
Bethel, J. S. 6830
Bethune, J. E. 6837
Beuter, J. H. 2825
Bevan, C. W. L., et al. 1357, 1637
Bevege, D. I. see Richards, B. N.
Beveridge, A. E. 802
Bevilacqua, B. see Simančík, F.
Bezáková, M. see Lehký, M.
Bhakare, H. A., and Rao, C. V. N. 6766
Bhambri, S. C. see Mukherjee, R.
Bhargava, N. 5593, 6817
Bhatia, D. N. see Asthana, M. N.
— see Singh, S. N.
Bhatia, K. see Karnik, M. G.
Bhatnagar, N. S., and Gupta, R. P. 1308
Bhatnagar, S. P. 3390
— see Rahman, W.
Bhimaya, C. P., and Kaul, R. N. 4922
— et al. 1138
Bhodipak (Bhodipuks), P., and Bumroongrasdr(a), P. 1917, 3923
Białobok, S. 1834
— and Bartkowiak, E. 5152
— and Żelawski, W. 1834
Bibelriether, H. 292
— see Köstler, J. N.
Biblis, E. J. 1434-5
Bicin, L. V., et al. 3187
Bickford, C. A. 6074
Bickford, M., and Hermann, R. K. 3816
Biddison, L. R. see Scowcroft, P. G.
Biddle, P. G., and Tinsley, T. W. 4160
Bidner-Barhava, N., and Ramati, B. 263
Bielerzewska, A. 4478
Bigras, G. see Levitin, N.
Bilan, M. V. 2004
Biliotti, E. see Cadahia, D.
Bingham, R. T. 165, 2535
Binkley, V. W., and Williamson, R. L. 3971
Birck, O. 5625
Bird, F., Hesp, T., and Watson, R. W. 4698
Birjukov, B. I., and Dročnev, Ja. G. 2342
Birjukov, M. V., Šeljapin, F. N., and Petri, V. N. 6470
Birkeland, R. 1385
Birnstiel, M. 100
Bírová, H. 959
Birse, E. L., and Robertson, J. S. 1754
Bishop, A. H. see Harlow, W. M.
Bismarck, C. von see Stegmann, G.
Bitterlich, W. 2831, 6108
Bittig, B. see Tromp, H.
Bjarnason, H. 3834
Bjazrova, E. A. see Abaturov, B. D.
Bjerkelund, T. C. 3968
Bjørgung, E. 6009
Björkman, E., Lundeberg, G., and Nömmik, H. 2285
Black, P. E. 3310
Black, T. M. 588
Blackmon, B. G., and Ralston, C. W. 6130
Blair, R. M. 1813
Blake, G. R. see Aldred, A. H.
Blanc, L. 3133
Bland, D. E., and Logan, A. F. 4577
— and Menshun, M. 1320
— see Kawamura, I.
Bleiweis, S. 5933, 5960
Blomquist, R. F. see Quirk, J. T.
Bloomfield, C. see King, H. G. C.
Blossfeld, O., Wonka, R., and Haasemann, W. 4782
Blum, B. M. 5668
— see Koelling, M. R.
Blum, R. see Heth, D.
Blyth, A. W. 4925
Blythe, R., and Kurath, E. 1147
Bobák, M., and Nečesaný, V. 4506
Bobruiko [Bobryko], B. I. 5440
Boccagni, G. 3962
Bocks, S. M. 4731
Bocock, K. L., and Heath, J. 48
Bodenmann, A., and Eiberle, K. 893
Boderick, D. F. see Hansen, R. P.
Bodig, J. 2968, 4570
— and Troxell, H. E. 4559-60
Boe, K. N. 686
Boersma, L. see Backer, L. W. de
Bogdan, N., and Untaru, E. 579
Bogdanov, B. 2235
Boggess, W. R., and Arnold, L. E. 345
— and Geis, J. W. 2101
— see Geis, J. W.
Bogner, W. see Kreeb, K.
Bogomolov, B. D. see Sokolov, O. M.
Böhme, H. see Braun, H. H.
— see Braun, H. J.
Böhme, P., et al. 6720
Böhner, G. see Kerscher, E.
— see Kollmann, F. F. P.
Bojanin, S. 1089, 2700, 3915
Bojčenko, A. M. 2750
Bol, M. 1186, 5627
— Folsche, G. H., and Tromp, P. H. M. 716
— see Loon, J. H. van
Boldt, C. E. 5563
— see VanHaverbeke, D. F.
Bolker, H. I., and Baxter, J. G. 3383
— and Terashima, N. 1324
Bolland, G. 3423, 5235
Bollen, W. B., et al. 5278
— see Ricard, J. L.
Bolotin, M. 3441
Bol'šakova, N. A. see Ljamin, V. A.
Bolyčevcev, V. G. 4007
Bond, G. 100
— and Hewitt, E. J. 3555
Bond, R. S., and Mawson, J. C. 6835
Bondarenko, N. Ja. see Gael', A. G.
Bondor, A. 4400
Bonneau, M. 1747
Bonnemann, A. 1720, 2479
Bonner, F. T. 257, 493, 2196
— and Broadfoot, W. M. 5270
— and Gammage, J. L. 2191
— and Ralston, C. W. 4993
— see Farmer, R. E., Jr.
Bonnor, G. M. 2803, 4348, 6115, 6125
Bonotto, S. 6597
Boocock, D. 1464
Boon, D. A., and Stellingwerf, D. A. 2794
Boone, R. S. 1532, 4544
Booth, C. 4131
Booth, H. E. 6221
Booth, L. G., and Reece, P. O. 3048
— see Amana, E. J.
Booth, T. C. 2276
Bootle, K. R. see Huddleston, E. B.
Borchert, R. 2225
Borden, J. H. 4263
— see Cameron, E. A.
Borges, L. C. see Leon, A.
Borisov, N. A. 1459
Bormann, F. H., et al. 5276
Borodin, A. L. 2597
Borodin, A. M., and Stepin, V. V. 1161
Borodina, N. A., and Plotnikova, L. S. 3466
Boronenko, Z. V. see Pejč, N. N.
Borota, J. 439
— and Procter, J. 5629
Borovikova, A. M. 253
Borowy, R. see Pročko, P.
Bors, J., and Glubrecht, H. 3090
Borsdorf, W. 3375
Børset, O. 3206, 4976, 5401, 5453
— and Hegre, A. 5432
— and Langhammer, A. 3718
Borsos, Z. 6179
Börtitz, S. 768, 5768
— and Breuel, K. 873
— and Vogl, M. 4020
Bortolotti, L. 6809
Bosch, R. van den see Hagen, K. S.
Bosman, D. L., and Banks, C. H. 3138
Bosman, H. L. 2319
Bosseaux, B. 2098
Bossel, H. 412
Bosshard, H. H. 4524, 4693, 6300
— and Bariska, M. 1238
Bosshard, W. 3999
Botezat, T. see Giurgiu, V.
Botkin, D. B., and Woodwell, G. M. 105
Bottle, R. T., and Wyatt, H. V. 1706
Botwin, M. 2356, 2816
Bouček, B. 5325
Bouchon, J. 2726
Boucsein, H. 3221
Boudet, A., et al. 90
Boughton, V. H. see Bachelard, E. P.
Boughton, W. C. 2415
Bouillon, A., and Mathot, G. 3325
Boullanger see Tabatabai, M.
Boullard, B. 1979
Bourchier, R. J. 4097
Bournon, R. N. 4680
Boutelje, J. B. 2938, 6674
— and Bravery, A. F. 6586
Boutique, R. 3459
Bovis, C. P., and Briggs, G. E. 5089
Bowen, G. D. 5090
— and Theodorou, C. 1985
Bower, D. R., and Ferguson, E. R. 5646
Boyce, J. S., Jr. 4115
Boyd, J. D. 4956
Boyer, M. G. 868
Boyer, W. D. 884
— and Evans, S. R. 3421
Božak, V. L., et al. 5694
Bozděch, J., and Temmlová, B. 2736
Božič, J. 3871, 5126
Braastad, H. 4399
Braathe, P., and Okstad, T. 2730
Brabänder, H. D. 2835, 6172, 6214
Bracker, C. E. 2475
Bradáč, V., and Struha, K. 2254
Bradbury, J. F. 855, 879
Bradley, R. T. 611, 2303
— see Johnston, D. R.
Brække, F. H. 3857
Bramble, W. C. see Merritt, C.
Bramhall, G. 6312, 6496, 6644

Brammanis, L. 2611, 4186
Bramwell, A. G. 708
Brandsberg, J. W. 39
Brantseg, A. 4314
Bratin, V. S. see Torgonskij, M. N.
Braun, H. H., Wolkinger, F., and Böhme, H. 2903
Braun, H. J. 1245, 6273
— Versteegh, C., and Böhme, H. 6272
— see Sauter, J. J.
Braun-Blanquet, J. 2084, 5349
Bravery, A. F. see Boutelje, J. B.
Bray, D. F. see Gouger, R. J.
Brayshaw, T. C. 177
Brazier, J. D. 1887, 3414, 2876-7
Brehme, K., et al. 2864
Brenan, J. P. M. 5223
— see Ross, J. H.
Brender, E. V., and Copper, R. W. 5739
Brendemuehl, R. H. 250
Brenden, J. J. 3075
Brener, W. D., and Beckman, C. H. 5857
Brennan, E. 4024
Brenneman, D. L. 2196
Breuel, K. see Börtitz, S.
Brewbaker, J. L. 5187
— see Gonzalez, V.
Brežnjak, M. 3001, 3038
Bricault, F. A. 5987
Bridges, W. L. see Roberts, P. J.
Briggs, G. E. see Bovis, C. P.
Briggs, L. H., Cambie, R. C., and Couch, R. A. F. 6746
Brinar, M. 1876, 5173
Brinkman, K. A. 2712
Briscoe, C. B., and Nobles, R. W. 636
— see Nobles, R. W.
Brit, G. de, and O'Carroll, N. 2525
Brittain, W. H. 3402
— and Grant, W. F. 178
Brix, H. 5102
Brizzi, G. 991
Brjuhanova, È. B. see Isaeva, L. N.
Broadbent, F. E. 5020
Broadfoot, W. M. 2298
— see Bonner, F. T.
Broda, E., and Schönfeld, T. 4972
Broda, J. 3181
Broekhuizen, J. T. M. 3490
— and Zwart, F. N. 1940
Broerman, B. F. S., Gatherum, G. E., and Gordon, J. C. 103
— see Gatherum, G. E.
Broerman, F. S. 3863
— see Hammer, J. G.
Bronner, H. A. 6172
Bronzov, O. V. see Kozlov, V. N.
Brook, S. E. G. 6417
Brook, T. S. 3103
Brouard, N. R. 2423
Brower, J. H. 4030
— see Woodwell, G. M.
Browicz, K. 220
Brown, A. H. F. see Carlisle, A.
Brown, C. L., and Kormanik, P. P. 5127
— and Lawrence, R. H. 5193
— McAlpine, R. G., and Kormanik, P. P. 1853
— see Kormanik, P. P.
Brown, E. E., Kunze, J. H., and La Plante, M. G. 4907
Brown, G. W., and Krygier, J. T. 3322
Brown, R. A., and Rowan, S. J. 864
Brown, R. S. see Hiller, C. H.
Brown, R. T. 2016
Brown, S. J. see Lyon, R. L.
Brown, W. J. 997
Browne, P. G. 5813
Browning, B. L. 2970
Bruce, D. 4299, 6074
— and Cowlin, R. W. 6075
— see Curtis, R. O.
Bruce, W. E. 1464, 6540
Brückner, E. see Köstler, J. N.
Brummitt, R. K. 1930
Brüning, D. 4199, 5619
Brunner 1419
Bruns, K. see Sandermann, W.
Bryant, B. S., and Garcia, J. M. R. 4649
— and Hoerber, G. F. 6464
Bryant, C. L. 4366
Bryce, J. 5403
Bryndum, H. 3876
Bublinec, E., and Mihálik, A. 35
Buchanan, M. see Horowitz, S.
Buchinger, M. 3201
Buchman, R. B. see Miller, W. E.
Buckner, C. H. 5927
Budniak, F. see Czereyski, K.
Buell, M. F. see Davidson, D. W.
Bueno, J. see González, V. R.
Buffam, P. E., Meyer, H. E., and Miskus, R. P. 5967
Bugała, W. 225
Buharin, P. D., Kolesnikov, N. N., and Ljalina, M. F. 5070
Buijtenen, J. P. van 1870
— Einspahr, D. W., and Peckham, J. R. 6681
Buit, S. S. 5408
Bujlov, D. A., and Anikaev, V. A. 3694
Bujnickaja, M. I. see Hutorščikov, I. S.
Bujukalić, H. 1472
Buker, H. G., and Hurd, P. D., Jr. 3324
Bukštynov, A. D., and Vasil'ev, G. I. 6781
Bulard, C. 3386
— and LePage-Degivry, M.-T. 5111
Bullard, R. W., and Campbell, D. L. 5918
Bullard, W. E. 576
Bumbieris, M. see Vaartaja, O.
Bumroongrasdr(a), P. see Bhodhipak, P.
Bunimovič, L. D. 1387
Bunney, R. S. M. 4042
Bunting, A. H. 3608
Bunting, W. R. see Sweaney, W. P.
Bunuševac, T., and Jovanović, S. 2139
Bura, D. 3871, 4031
Burford, A. O. see Roberts, P. J.
Burger, D. 3203, 3268
Burger, W. C. 5225
Burges, H. D. 912
Burgess, H. J., and Peek, J. D. 3047
— see Kay, J. A.
Burghardt, C. S. 5705
Burgos, J. C., and Arreghini, R. I. 6506
Burgos Martínez, F., et al. 1158
Burke, W. 590
Burkhalter, A. P., Robertson, C. F., and Reines, M. 5163
Burkhart, H. see Avery, T. E.
Burkov, V. N. 1818
Burley, J. 3404
— Press, A., and Morgan, J. F. 2921
— et al. 6282
Burmester, A. 6304, 6562, 6567, 6708
Burnett, A. R., and Thomson, R. H. 4590, 6388
Burnevskij, Ju. I. 2717
Burns, P. Y. see Keister, T. D.
Burns, R. M. 3747
Burrows, P. M. 5491
— see Geary, T. F.
Burrows, W. J. see Reid, D. M.
Bursin, A. Ja., and Petri, V. N. 4765
Burton, J. C. 5020
Burton, J. D. see Plass, W. T.
Busby, R. J. N. 3706
Bushing, R. W. 6016
Bustamante Ezpeleta, L. 1580
Buszewicz, G. 5484
Butcher, J. A. 1539
— and Howard, M. 6651
Butcher, J. W. see Carlson, R. B.
Butenas, Ju. B. 6073
Butenko, M. see Ostalski, R.
Butkute, A. P. 2252
— see Savčenko, A. M.
Butler, E. E. see Webster, R. K.
Butterworth, D., Kay, D., and MacNulty, B. J. 1530
— and MacNulty, B. J. 1528
— see Bampton, S. S.
Byčenkova, È. A. 1906-7
Byhovskij, È. G., et al. 3378, 5093
Bykov, V. D. see Kolesnikov, I. V.
Bykova, L. N. see Remezov, N. P.
Byrnes, W. R., and Merritt, C. 2271
— see Dhillon, P. S.

Caballero Deloya, M. 1915, 6842
— and Robles Ruíz, A. E. 6784
— and Toral Chacón, J. 5316
Cabral, M. T. E. Cardoso, and Figo, M. de L.N.C.B.P. Morais 6051
— see Figo, M. de L.N.C.B.P. Morais
Cachan, P. 22, 372
Cadahia, D. 2649
— Demolin, G., and Biliotti, E. 5996
— Insua, A., and Mallen, J. A. 4233
Cafley, J. D. 5884
Calev, M. see Tsalev, M.
Callaham, R. Z. 167, 5146
Calléja, M. 36
Callin, G. 3886
Callison, C. H. 1697
Čalov, N. V., and Korotkov, N. V. 6727
Calvert, W. W., and Garlicki, A. M. 2404
Calvin, C. L. 2494
Camargo, P. Nogueira de, and Arens, K. 377
Cambie, R. C., and Couch, R. A. F. 6395
— and James, M. A. 5075
— see Bennett, C. R.
— see Briggs, L. H.
Camel, J.-P. 240
Cameron, A. L. 3442
Cameron, E. A., and Borden, J. H. 1026
Cameron, E. D. 1165
Campagna, J.-P., and Lamontagne, Y. 5827
Campbell, B. 5053
Campbell, D. L. see Bullard, R. W.
Campbell, I. M. 1802
Campbell, K. G., and Hadlington, P. 2609
Campbell, R. G. 2806
Campbell, R. W. 4230

Campbell, T. E. 5489
Campinhos, E., Jr. 3741
Campos R., R., and Christiansen, P. 3964
Çanakçioğlu, H. 4188
Cankov, G. 5754
— see Szczepański, H.
Canov, C. see Fakirov, V.
Canova, P. 878
Cantiani, M. 4384
Capecki, Z. 2685
Capella, J. A., and Conger, A. D. 4025
Cappelli, M. 4354
Capuder, A. 6167
Capuron, R. 216
Caramiello, R. 2182
Carbonnier, C. 2307, 3877, 4356, 6850
Carde, J.-P. 93
Čarkina, A. P. 5784
Carle, P. 6068
Carlisle, A., and Brown, A. H. F. 2957, 4912, 5236
— Brown, A. H. F., and White, E. J. 1762-3
Carlquist, S. 209
Carlson, I. 670
Carlson, J. A. see Fahlstrom, G. B.
Carlson, R. B., and Butcher, J. W. 963
— and Wilson, L. F. 5973
Carman, R. M., and Marty, R. A. 1645
Carmean, W. H. 6136
Carne, P. B. 4240
Carolin, V. M., and Thompson, C. G. 973
Carpenter, P. N. see Young, H. E.
Carpenter, R. D. 1556
Carpenter, S. B. 810
Carré, J. 3142
Carroll, M. N., and Bergin, E. G. 4647
Carruthers, J. F. S. 6440
Carter, J. C. 4123
Carter, K. W. 6215
Carter, M. C. see Martin, J. W.
Cartier, Y. see Legault, A.
Carvell, K. L. 5439
— and Cech, F. C. 5639
Casperson, G. 6289
Cassagne, C. 6770
Castaños, L. J. 6241
Castellani, C. 877, 2115
Castellani, E., and Cellerino, G. P. 2570-1
— and Prevosto, M. 2326
— Sekawin, M., and Frison, G. 2241
Caster, K. L., Barbour, J. F., and Rudinsky, J. A. 1038
Castillo, B. del, et al. 3350
Častuhin, V. Ja. 5018
Catrina, I. see Dobrescu, Z.
Cattani, V. 3621
Causton, D. R., and Wareing, P. F. 3373
Cavalcaselle, B. 4245
— and Bellis, E. de 2650, 4242
— see Bellis, E. de
Čavčavadze, E. S. 2873-4
Cayford, J. H., Chrosciewicz, Z., and Sims, H. P. 3650
— and Jarvis, J. M. 478
— and Waldron, R. M. 3751
— see Jarvis, J. M.
— see Waldron, R. M.
Cech, F. C. see Carvell, K. L.
Cech, M. see Goulet, M.
Cech, M. Y., and Huffman, D. 6635
Cecchettini, R. J. 407
Cederstam, B. 4850
Ceianu, I., Rădoi, D., and Constantinescu, E. 5951
— see Dissescu, G.
Čekalinskaja, N. I. see Nesterovič, N. D.
Cellai, G. C. 6267
Cellerino, G. P. see Castellani, E.
Çepel, N. 1782
Cerchez, G. 707
Cerling, G. I. see Zak, C. A.
Cernetic, V. 6496
Černov, A. F. 2339
Cernusca, G. 2074
— see Bernhard, J.
Černý, Z., and Dlouhý, V. 2243
— et al. 1332
Černyšev, V. D. 5375
Cerra, N. R. 6795-6
Červenak, P. 6467
Červenka, V. 4481
Červinková, H., and Temmlová, B. 2516
Cesarini, J. 3757
Cestar, D. 2755
— et al. 364
Četverikov, A. G., Silkin, L. Ja., and Vanin, A. F. 4013
Chabrol, P., and Ferré, Y. de 5452
Chahal, D. S. 1585
Chaiglom, D. 4244
Champagne, E. G. see Cooper, G. A.
Champs, J. des 701
Chan, W. R., Taylor, D. R., and Willis, C. R. 4598
Chandra, R. 3934
Chandras, G. S., and Grayson, A. J. 6185
Chaney, W. R., and Kozlowski, T. T. 315
Chang, C. I., and Kennedy, R. W. 1142
Chang, H.-M. see Sarkanen, K. V.
Chang, N. K. see Kim, C. M.
Chang, Y.-T. 3482
Chanmamedov [Hanmamedov], K. M. 1476
Chansler, J. F. 1011
Chapman, E. S. B. 4859, 6173
Chappelle, D. E. 1182
— see Sassaman, R. W.
Chararas, C. 2668, 4264, 6028
— and Berton, A. 1029
— and Chardenon, J. 3361
— see Berton, A.
Chardenon, J. 3355, 3435, 3491
— see Chararas, C.
Chardin, A. 2998
Charzewski, J. 338
Chase, A. J. see Dyer, R. F.
Chatterjee, P. N., Singh, P., and Shivaramakrishnan, V. R. 5921
— and Thakur, M. L. 5047
— see Roonwal, M. L.
Chaudhuri, R. H. N. 4527
Chaudhuri, S. B., and Das, R. C. 6733
Chaudhuri, S. K. 3398
— and Mallik, N. 3397
Chauthani, A. R., and Claussen, D. 5991
Chautrand, L. 788
Chauvet, B. 6089
Chavasse, C. G. R. 3989
Chávez, G. see Sánchez-Viesca, F.
Chawla, J. S., Sharma, A., and Krishnaswami, S. P. 4803
Chedzoy, J. C. 542
Chen, C.-C. 4080
— see Jong, S.-C.
Ch'en, C. see Wang, H.
Chen, C.-S. 1974
Cheriyan, P. V. 6612
Chiani, R. G. 3063, 4703
Chiao, K.-M. 4407
Chiasson, L. P. 3402
Chiba, O., and Zinno, Y. 874
— see Zinno, Y.
Chiba, S. 2178, 2429, 3431
— and Ogawa, A. 2515
Chiba, Y. see Horioka, K.
Chilcott, L. C. 3794
Childs, T. W. 5873
— and Edgren, J. W. 820
— and Shea, K. R. 4076
Chin, F. K. 1439
Chinappa, B. 5898
Ching, K. K. see Livingston, G. K.
— see McKimmy, M. D.
Ching, T. M. 2047
— and Slabaugh, W. H. 1873
Chira, E. 5137
Chirilă, A., and Georgescu, N. 6704
Chiru, V. 3733
Chmelař, J. 5545
Cho, R. M. see Son, D. S.
Chodzicki, E. 2164
Choi, S. K. 534
Chou, Y.-C. see Wang, H.
Chow, S.-Z., and Hancock, W. V. 4645, 6457, 6459
— Hancock, W. V., and Mukai, H. N. 6458
Chowdhury, K. A., Preston, R. D., and White, R. K. 1372
Christensen, F. J., and Barnacle, J. E. 1540
— see Barnacle, J. E.
Christensen, G. N. see Sadoh, T.
Christensen, P. S. see Gibson, I. A. S.
Christensen, S. A. 4707
Christensen, W. W. see Herrick, O. W.
Christiansen, P. 3979
— see Campos R., R.
Christopher, J. F. see Beltz, R. C.
Chrosciewicz, Z. 794
— see Cayford, J. H.
Chroust, L. 617, 2309
Chtchiglovsky [Ščiglovskij], B. 4468
Chu, A. C. see Wang, H.
Chudnoff, M., and Goytia, E. 1495, 4687
Chumakova [Čumakova], B. M. 2617
Chun, W.-Y., and Tan, P.-C. 3483
Chung, S.-C. see Jong, S.-C.
Church, J. A., and Stanley-Harris, G. 2118
Churchwell, N. R. 2196
Chylarecki, H., and Giertych, M. 5152
Ciampi, C. 524
Cichowski, P. 2734
Ciesla, W. M., and Bell, J. C., Jr. 996, 6023
— Bell, J. C., and Curlin, J. W. 1153
Ciljurik, A. V. 4113
Ciok, B. see Królikowski, L.
Ciolac, N. 504
Čipašvili, V. B. 1629
Ciumac, G., et al. 2132
Cividini, R. 710, 3959
Čiževskij, M. P., and Škalenko, I. G. 4630
Čižikova, V. A. 354
Clad, W. 4641
Clapp, L. L. see Richesson, M. A.
Clark, E. W., and Osgood, E. A., Jr. 2589

Clark, F. B. 619
Clark, G. M., et al. 4028
— see Sweaney, W. P.
Clark, J. W. see Scheffer, T. C.
Clark, W. A., and Loegering, W. Q. 2475
Clarke, E. H. 6672
Clarke, L. D., and Hannon, N. J. 2105
Clark-Lewis, J. W., and Dainis, I. 6754
Claudot, J. see Dureuil, R.
Clausen, J. J., and Kozlowski, T. T. 118, 5109
— see Kozlowski, T. T.
Claussen, D. see Chauthani, A. R.
Claveau, P. see Masquelier, J.
Cleary, B. D. see Waring, R. H.
Clements, R. H. 989
Clements, R. W. 3918
Clepper, H. 3214
Clutter, J. L. see McGee, C. E.
Coaldrake, J. E. see Moore, A. W.
— see Russell, J. S.
Cobb, F. W. Jr., and Libby, W. J. 4144
— and Platt, W. D. 2527
— and Wilcox, W. W. 4106
Cobb, S. S. 789
Coccia, L. 1829
Cochrane, G. C. see Gray, J. D.
Cockcroft, R. see Smith, D. N.
Cockle, M. T. see Griffin, J. R.
Coelho, H. Pereira 6769
Coffman, M. S., and Love, L. D. 3596
Čokl, M. 1085, 6151
Cokley, K. V., and Ryley, T. F. 6554
Colbrant, P., and Hatt, J.-M. 2646
Coldwells, J. L. 3682
Cole, D. W., and Gessel, S. P. 5277
Cole, L. R. 5970
Cole, L. W., and Kaufman, H. F. 782
Cole, W. E. 1018
— and Weenig, C. 1019
Colley, R. H. 6541
Collicott, L. V. see Dell, T. R.
Collier, J. W. 6485
Collins, A. B., III 2273
Collins, C. H., et al. 3070
Colwell, S. J. 4455
— see Tamblyn, N.
Comanor, P. L. 3610
Comstock, G. L. 2948
Concha Marcavillaca, M. 526
— and Montaldi, E. R. 120, 5315
Cones, W. L. 5858
— and True, R. P. 856
Conger, A. D. see Capella, J. A.
Conkle, M. T., Libby, W. J., and Hamrick, J. L., III 449
Connell, C. A. 2443
Connola, D. P. 2653, 3402
Connolly, J. D., et al. 1348, 4594
Conover, C. A. see Joiner, J. N.
Constantinescu, E. see Ceianu, I.
Cook, A. J. 6442
Cooley, L. W., Jr. see Storey, T. G.
Cooling, E. N. 1936
— see Lamb, A. F. A.
Cooper, D. W. 1941
Cooper, G. A. 6529
— and Champagne, E. G. 3051
— see Merz, R. W.
— see Rice, W. W.
Copăceanu, D. see Bălănescu, E.
Copes, D. L. 3791-2, 5548
Čopik, V. I. 5320
Copper, R. W. see Brender, E. V.
Corbett, N. H. 1506
Cordell, C. E., and Stambaugh, W. J. 846
Córdoba G., J. R., and Villegas V., A. 1794
Cormack, W. M. 2835
Cornwell, S. M. 3839
— see Stone, E. L.
Corona, E. 1124-5, 3960
Corns, W. G., and Dai, T.-S. 4068
Corpening, B. H. see Vogenberger, R. A.
Corrales, J. A., et al. 3213
Cosico, A. B. 5690
— and Utleg, J. L. 5691
Cosico, R. A. 5689
Costa, E. W. B. da 1474
— see Rudman, P.
Cote, M. 5596
Côté, W. A., Jr. 1207, 6266
— Day, A. C., and Timell, T. E. 6287
— Pickard, P. A., and Timell, T. E. 1248
— Simson, B. W., and Timell, T. E. 1330
— and Timell, T. E. 1331
— et al. 1207, 4517, 6286
— see Harada, H.
— see Keith, C. T.
Cottam, G. see Goff, F. G.
Cotter, D. J., and McGinnis, J. T. 2441
Couch, R. A. F. see Briggs, L. H.
— see Cambie, R. C.
Coulson, W. B. see Keirle, R.
Coupe, C., and Watson, R. W. 3055
Coulter, J. K. 475
Courtois, J. E., et al. 4016
Coutin, R., and Riom, J. 4286
Coutts, M. P., and Dolezal, J. E. 1046
Covassi, M. see Arru, G. M.
Cowan, B. D., and Nagel, W. P. 1023
Cowan, R. S. 219
Cowlin, R. W. see Bruce, D.
Cowling, E. B. see Levi, M. P.
Cox, D. R. see Williams, E. L.
Coyne, J. F. 5958
Cozzo, D. 2259, 2313, 5464
Craig, H. M. see Smith, R. B.
Cremers, G. see Attims, Y.
Crequer, P. C. 3989
Crews, D. L. 1280, 4754
Critchfield, W. B. 168
— see Krugman, S. L.
Croker, T. C., Jr. 4091
Crombrugghe, S. A. de 5057
Cromer, D. A. N. 4956
— see Larsen, E.
Cromer, R. N., and Vines, R. G. 795
Crompton, C. W. see Bassett, I. J.
Crook, D. 3130
Croon, I. 1343
Crosby, J. S., and Loomis, R. M. 5782
Crossley, D. A., Jr. see Witkamp, M.
Crow, A. B. see Keister, T. D.
Crowe, N. D. 2851
Crowe, T. J. 2588
Cruwys, G. E. 3777
Csanády, E. see Szendrey, I.
Cserjesi, A. J., Quon, K. K., and Kozak, A. 3060
Czesznák, E. 5341
Csizmazia, J. 685
Csöre, P. 3182
Csósz, J. see Vámos, R.
Cucoş, V. 5561
Čudinov, B. S. 1270, 4548
— and Stepanov, V. I. 2931, 4547, 6325
— see Sosnina, A. A.
Čudinov, S. V. see Bardyšev, I. I.
Čudnyj, A. V. 5660
Cuenkov, V. S. 6073
— and Fedosimov, A. N. 6104
Cuevas, L. E. see Barnacle, J. E.
Čumakova, B. M. see Chumakova, B. M.
Čumin, V. T., and Jurčenko, G. I. 5433
Cummins, N. H. O. 1471
Cunningham, A. 3989
Cunningham, G. R. 1174
Cunningham, R. A. see Hart, J. B., Jr.
Čuprova, N. A. see Levin, É. D.
Čurikova, É. K. 1512-3
Curlin, J. W. see Ciesla, W. M.
Currò, P., and Ghisi, G. 4310
Curry-Lindahl, K. 3202
Curtin, T. W. 3809
Curtis, H. S. 3200
Curtis, R. O. 4389
— and Bruce, D. 6078
Cusset, G. 218
Cutler, D. F. see Forman, L. L.
Cvetaeva, E. M. see Tiščenko, D. V.
Cybukov, V. N. see Bedenko, V. F.
Cybulko, T. 1820
— and Surmiński, J. 4581
Cyganov, D. N. see Petrov, V. V.
Cymek, A. A. 6781
Cymorek, S. 1522
Cyplakova, O. D. 872
Czaninski, Y. 1234
Czarnowski, M. S., Humphreys, F. R., and Gentle, S. W. 4361
Czell, A. 2074
Czereyski, K., Budniak, F., and Ilmurzyński, E. 2378
Czerwiński, A. 3628
Czvikovszky, T. 4713

Dabral, B. G. see Seth, S. K.
Dąbrowski, T. see Hejmanowski, S.
Dafauce, C. 2647, 2651
Dagg, M. 4944
Dahl, E., Gjems, O., and Kielland-Lund, J., Jr. 3627
Dahlsten, D. L. 1050
Dahms, W. G. see Alexander, R. R.
— see Johnson, F. A.
Dai, T.-S. see Corns, W. G.
Dainis, I. see Clark-Lewis, J. W.
Dajoz, R. 6615
Dakshini, K. M. M. 2089
Dale, P. S. 1024
Dale, W. L., and Turnbull, A. R. 1735
Dallas, W. G. 589, 668
Damman, A. W. H. 5282
Danbury, D. J., and Wolfe, J. C. 3533
Danell, C. 1704
Daniel, T. W. 2040
Daniëls, L. see Minderman, G.
Danilewicz, K. 2548
Danilin, A. V. 687
Danilov, P. I. 890
Dannatt, N., and Wittering, W. O. 3845
Dan'šin, I. I. 5577
Dapper, H. 3285
Darby, S. P. see Belcher, E. W., Jr.
— see Webb, C. D.
Darker, G. D. 3451-2
Darling, M. L. S. 5396

Darling, S. F. see Pearl, I. A.
Darrah, G. V., and Dodds, J. W. 2268
— see Good, H. M.
Das, B. N., and Rajkhowa, S. 6782
Das, R. C. see Chaudhuri, S. B.
Dasmann, R. F., et al. 4171
Dässler, H.-G. 4018
— Kästner, W., and Ranft, H. 5767
Datta, R. C. see Agarwala, V. P.
Datta, S. C., Murti, V. V. S., and Seshadri, T. R. 5079
Daubenmire, R. 5334
Dauëtas, M. S. 3842
Daum, C. R. 107
Dautzenberg, S. 1565
David, A. 3447
David B., E., and Somberg, S. I. 4463
Davidson, A. G., and Prentice, R. M. 5815
— Reeks, W. A., and Prentice, R. M. 4077
Davidson, D. W., and Buell, M. F. 355
Davidson, J. 3443
Davidson, J.-G., Lortie, M., and Lavallée, A. 4720
Davidson, J. L. 1194, 4471
Davies, E. J. M. 388
— see Atterson, J.
Davies, G. W. 6276
— see Harada, H.
Davis, E. A., Ingebo, P. A., and Pase, C. P. 5798
Davis, E. L. see Crabtree, D. E.
Davis, G. P. M. 2845
— and Iliescu, V. 6237
Davis, J. B. 5675
Davis, L. S. 5494
Davis, T. S., and Luttrell, E. S. 5879
Dawkins, H. C. 3608
Dawson, J. W. 1944
Day, A. C., see Côté, W. A., Jr.
Day, M. W. 2316
Day, R. J. 1938
De, J. N. 4832
Dean, A. R. 6483
Dean, F. M., et al. 1356, 4596-7
Dean Guelbenzu, M., and Santos Ruiz, A. 5066
Deanković, A. 431
DeBano, L. F., et al. 3319
DeBarr, G. L. 2610
Debazac, E. F. 5125
Deberdeev, A. A. 678, 2369
DeBoo, R. F. 4206
Dechamps, R. see Lebacq, L.
— see Liben, L.
DeCoste, J. H. see Sackett, S. S.
Décourt, N. 1134-5, 2742
Dedan, J. K. see Gibson, I. A. S.
Deitschman, G. H. see Goebel, C. J.
Dekanić, I. 3534-5
Delatour, C. 2534
Delaunay, N. L. see Delone, N. L.
Delbeck, K. 4393
Delecour, F., Weissen, F., and Nanson, A. 3275
Dell, J. D., and Ward, F. R. 4049, 5792
— see Orr, W. J.
Dell, T. R., and Collicott, L. V. 5632
Delmas, J. C. see Demolin, G.
Delone [Delauney], N. L., et al. 5771
Delova, G. V. 1832
Delvaux, J. 3570
Delver, P., and Post, A. 5656
Delwiche, C. C. 5020
Demalsy, P. 5774
DeMars, C. J., Jr. 1016
Demin, K. A., Vasjukov, V. A., and Kipruškin, A. N. 2399
Dem'janovskij, K. I., Pinežskij, D. I., and Terent'eva, G. Ja. 6430
Demkiv, O. T. 3349
Demolin, G., and Delmas, J. C. 5995
— see Cadahia, D.
Dempsey, G. P. 6829
Denaeyer-de Smet, S. 5352, 5362
Denev, D. 3507
Denić, S. 4031
Depliščev, I. T. 2751
Deppe, H.-J. 6562, 6580
— and Ernst, K. 1587
— and Lux, B.-V. 3076, 4717
— see Gersonde, M.
Dereuddre, J. 3525
Dérföldi, A. 2728, 6123
Deromedis, R. see Lotti, A.
Derr, K. see Wilde, S. A.
Derr, W. F., and Evert, R. F. 2925
Derrington, C. F. see Pepper, L.
Derviz-Sokolova, T. G. 3594
Desai, R. L. 6490
— and Shields, J. A. 6411
Desai, S. G., et al. 5897
Desculţu, H., and Dumitru, I. 1601
Deshmukh, D. K. see Kaikini, N. S.
Deveria, N. 3856
Devi, L. R. see Wilson, K. I.
Devillez, F., and Antoine, R. 5630
Dexter, B. D. 3676
Dhamaney, C. P. 4822
Dharmadhikari, P. R. 6042
Dharmakumarsinhji, K. S. 3200
Dhillon, G. S. 5429
Dhillon, P. S. 4064
— Byrnes, W. R., and Merritt, C. 4062-3
Diamant, R. M. E. 4679
Díaz, E. see Sánchez-Viesca, F.
Dibuz, J. J., and Shelton, F. J. 3023
Dickinson, F. E. 1209
Dickison, W. C. 210-1
Dickmann, D. I., and Kozlowski, T. T. 117
Dieterich, H. 3177
Dieterich, J. H. 2462
Dietrichs, H. H., and Funke, H. 115
— see Simatupang, M. H.
Dietrichson, J. 3411
Dietz, D. R., and Tigner, J. R. 5917
Dietz, J. P. 1107
Dietz, P. 4337
Digby, J., and Wareing, P. F. 123
Dik, S. R. 45
Dillewijn, F. J. van 1099
Dillner, B. 6674
Diment, J. A., Ritchie, E., and Taylor, W. C. 1642
Dimitri, L. 2686, 6082
— and Zycha, H. 5846
Dimitrov, D. see Želev, I.
Dimitrov, E. see Donov, V.
Dimitrov, H. 255
Dimitrovský, K., and Vesecký, J. 575
Dimock, A. W. 2475
Dimond, J. 2608
Dinesman, L. G., and Šterenberg, L. E.
Dinulescu, A. 5669
Dinwoodie, J. M. 2959
Dion, J. 360
Dissescu, G., and Ceianu, I. 4232, 5998
Dissescu, G.—continued
— et al. 2633
Dissescu, R. see Popescu-Zeletin, I.
Ditchburne, N. see Marks, G. C.
Ditrich, B., and Kervina, L. 6558
Dittmar, O. 5401
— and Knapp, E. 3715
Dixon, J. R. 6815
Djankov, A., et al. 2859
Djurbabić, B., Vidaković, M., and Kolbah, D. 156
Dlouhý, V. see Černý, Z.
Dmitriev, A. F. 753, 5753
Doane, C. C. 4231
Doat, J. 659
— see Petroff, G.
Dobie, J. 1403
— and Parry, H. W. 4673, 6667
— Sturgeon, W. J., and Wright, D. M. 6505
Dobrescu, Z., and Catrina, I. 547
Dobrinov, I. see Kalinkov, V.
Dobromyslov, B. I. 5724
Dobrovol'skij, I. A. 3905
Dobrý, J. 532
Dobrzańska, J. see Trampler, T.
Docenko, A. P., Poljakov, N. E., and Poljakova, L. P. 5537
Dodds, J. W. see Darrah, G. V.
Dodge, W. E., Loveless, C. M., and Kverno, N. B. 886
— see Radwan, M. A.
Doerksen, A. H. see Hermann, R. K.
Doerner, K., Jr. 320
Dogaru, V. see Alexandru, S.
Doidge, D. F. 4248
Doley, D. 1838
— and Grieve, B. J. 108
Doležal, B. 6187
Dolezal, J. E. 1047
— see Coutts, M. P.
Dolgolikov, V. I. 153
Domburg, G. Ė., et al. 6399
Domingo, I. L. see Sinues, B. C.
Dominik, J. 4079
Dominik, T., and Majchrowicz, I. 3564
Donaldson, C. see Hodgson, G. L.
Donaldson, C. H. 2490
Donaldson, F. S., Jr. 6066
Donaubauer, E. 2421, 4121, 2503, 2569
Dončev, G. 2859
— and Vasilev, T. 2859
Dončev, Ž. B. 5416
Donini, B. 4026
Doniţă, N. see Paşcovschi, S.
Donley, D. E. 4184
Donnelly, B. J., Donnelly, D. M. X., and O'Sullivan, A. M. 6393
Donnelly, J. R. see Zahner, R.
Donov, V., Dimitrov, E., and Jorova, K. 4995
Doolittle, W. T. see Little, E. L., Jr.
Doppel'mair, G. G., et al. 71
Dorman, K. W. see Barber, J. C.
Dorn, D. E. see Pitcher, J. A.
Dorn, H., and Egner, K. 2933
Dorodneva, V. I. 95
Dorohov, B. A. 671
Dorsey, C. K. 4246
Dorsser, J. van 2222
Dortignac, E. J. 59
Dost, W. A. 1460, 4469
Dotzenko, A. D., Papamichos, N. T., and Romine, D. S. 3261
Dougherty, R. H. see Schimke, H. E.

Dourojeanni, M. J. 4241
Doyle, D. V., and Markwardt, L. J. 4787
Drăgut, N. 430, 5934
Drake, A. D. 3976
Dražič, M. 3871
Dreisbusch, G. see Ziegler, H.
Drescher, W. 4933
Dressler, M. see Štaud, V.
Drewes, S. E., and Roux, D. G. 2988
— et al. 1352, 1628
Drgoň, G. see Koleják, M.
Driessche, R. van den, et al. 5123
Drift, J. van der 46
Dročnev, Ja. G., Bestemjannikov, Ju. V., and Bedenko, V. F. 2346
— Pilinovič, V. F., and Trefilov, P. S. 5663
— see Birjukov, B. I.
Drooz, A. T. see Aldrich, R. C.
Drožalov, M. M. 790
Drozdovskij, G. P. 731
Druijff, A. G. 716
Družinin, V. N. 3117
Dube, G. F. see Young, H. E.
Dubin, H. J. 2559, 5817
— and Walper, S. 5888
Dubina, B. V. 2231
Dubois, R. 4474
Duff, G. 2729
Duff, J. E. 6530
Duffey, E. 4911
Duffield, J. W. 6414
Duffner, W. 6210
Duffy, P. J. B. see Knight, H.
Duhovnikov, Ju., and Iliev, A. 6159
Dumbroff, E. B., and Michel, B. E. 5267
Dumitriu-Tătăranu, I. 5474
Dumitru, I. see Descuľţu, H.
Dummel, K. 4431
Dummer, P. C. R. see Humphrey, B. E.
Duncan, C. G. 3088
Dunger, W. 49
Dunikowski, S. 4032
Dunlap, W. H., and Shipman, R. D. 6129
Dunmire, D. E., and Englerth, G. H. 6504
— see Kurtenacher, R. S.
Dunn, E. L. see Schulze, E. D.
Durairaj, K. 5429
Duran, V. see Grobnic, G.
Durant, J. A., III 4212
Dureuil, R., and Claudot, J. 5550
Dürr, H. 663
Durzan, D. J. 4214
— and Steward, F. C. 3538
Dušek, V. 2224
Dutilloy, P. 1168
Dutta, B. K. see Gupta, R. K.
Duvigneaud, P. 5359, 5364
Duyckaerts, C. 976
Dwinell, L. D. 4120
Dwyer, J. D. 197
— and Hayden, M. V. 1931
Dyer, E. D. A. 2673
Dyer, R. A. 198
Dyer, R. F. 4794
— Chase, A. J., and Young, H. E. 4804, 6685
— see Young, H. E.
Dyer, W. G. 3402
Dylis, N. V. 351
— see Sukachev, V. N.
Dyrenkov, S. A. 2125
Dyrness, C. T. 1073
— see Rothacher, J.
Dyskin, B. M., and Korolev, V. V. 5666
Dyson, P. J. 1421
— see Lawrence, D.
Dyson, W. G. 538, 4944
— and Freeman, G. H. 2179, 5490
— and Herbin, G. A. 3351
Džanpoladova, V. P., et al. 6763
Dzbeński, W. 2927
Džekov, S. 234, 3871
Džekova, M. 278
Dzięciołowski, R. 2586, 4169
— and Pielowski, Z. 892
Dziewanowski, R. 6653
Dziobek, K. see Pahlitzsch, G.

Eades, B. W. 1464
Earl, D. E. 5600
Ebel, B. H. 4745
Ebell, L. F. 2037
Eberhard, L. see Roudier, A. J.
Eberhardt, E., Kopp, D., and Passarge, H. 4976
Ebert, W. 4202, 4223, 5754, 5984
Ebringerová, A., et al. 1329
Echenique-Manrique, R. 6360
Eckelman, C. A. 1458
Eckhart, G. 2737
Ecklund, B. A. see Resch, H.
Eckmüllner, O. 6172
Eckstein, D. see Bauch, J.
— see Liese, W.
Eckstein, H. 4948
Eden, C. J. see Adams, R. S.
Eden, L. T. E. 2470
Eder, H. 3904
Edgren, J. W. 514
— see Childs, T. W.
Edlin, H. L. 224, 1709, 1921, 3216, 3473, 4914, 5210
Edwards, D. 2094, 3636
Efimenko, O. M., and Ageenkova, L. V. 3166
Efimov, Ju. P. see En'kova, E. I.
Efremov, D. F. 1999, 2005
Efremov, S. P. 342
Eggler, W. A. 2772
Egner, K., Jagfeld, P., and Kolb, H. 6445
— see Dorn, H.
Egorova, S. V. see Perel', T. S.
Egusa, Y. 4657, 6261
Ehlbeck, J. see Möhler, K.
Ehlers 3908-9
Ehrhardt, W. see Schwerdtfeger, F.
Eiberle, K. 4165, 6803
— and Ziegler, F. 4168
— see Bodenmann, A.
Eichert, J. P. see Shipman, R. D.
Eichhorn, O. 929, 2590, 5937
— see Merker, E.
— see Pschorn-Walcher, H.
Eickner, H. W. see Tang, W. K.
Eifler, I. 1902
Eilert, A. G. 594
Einola, J. 4908
Einspahr, D. W., and Benson, M. K. 187
— Benson, M. L., and Peckham, J. R. 5180
— see Benson, M. K.
— see Buijtenen, J. P. van
Eis, S. 314, 2035
Ekberg, I., and Eriksson, G. 5116
— Eriksson, G., and Šulíková, Z. 5117
— et al. 5118
— see Eriksson, G.
Ekimova, T., et al. 2859
Eklund, B. 2768
Eklund, R. 2854, 4468
Ekong, D. E. U., and Idemudia, O. G. 1346
— and Olagbemi, E. O. 4595
el Dabh, R. S., and Asakawa, S. 2187
Elder, R. A., Job, J. G., and Pearson, A. J. 4791
Elers, T. L. see Pneumaticos, S. M.
Elgee, D. E. see Neilson, M. M.
Elgersma, D. M. 858
Eliasson, L. 5401
Eliçin, G. 3394
Elisei, F. 6196
Elk, B. C. M. van 527, 540
— see Oldenkamp, L.
Elkington, T. T. 5172
Ellertsen, B. W., and Rogers, L. 1175-6
Elliott, G. K. 5913
Elliott, K. R., and Muldrew, J. A. 1057
Ellison, L. 75
Elrick, W. R. 4614
Elvira Martin, L., and Gutierrez Oliva, A. 715
— see Maza, J. de la
Elwell, H. M. 622, 3882
Em, H. 239
Embree, D. G. 974
Emolkina, T. F. 2033
Emonnot, P., et al. 4193
Emrović, B. 2762, 2775, 2778
Enčev, E. see Nikolov, S.
Endean, F. 4376
Enderlein, H. 5619
— and Kästner, W. 2439
Endicott, L. E., and Frost, T. R. 3144
Endo, I. see Maruyama, K.
Endtmann, J. 3496
Enesco [Enescu], V., et al. 2179
Enescu, V. 480
— and Benea, V. 2179
— Niţu, C., and Florescu, I. 5307
Engelmann, F. 3324
Engels, J. D. 738
Englerth, G. H. see Dunmire, D. E.
— see Schumann, D. R.
English, D. A. see Morrison, T. M.
En'kova, E. I., Efimov, Ju. P., and Širnin, V. K. 181
Enriquez, L. 2604
Entwistle, P. F. 4218
Enzell, C. R., Thomas, B. R., and Wahlberg, I. 1334
Eraslan, I., and Evcimen, B S. 4316
— and Kalipsiz, A. 4323
Erdélyi, G. 3105, 3121
Erdmann, G. G. 5606
— and Green, L. 2272
Erdoğan, A. 792
Erickson, E. C. O. see Lowery, D. P.
Erickson, J. R. 2397
Erickson, O. M., and McCorquodale, J. A. 1785
Erickson, R. W. 4759
Eriksson, G., Šulíková, Z., and Ekberg, I. 3588
— see Ekberg, I.
Eriksson, H. 4395
Eriksson, K. E. 6674

Eriksson, L. 2972
Ern, H. 361
Ernst, K. see Deppe, H.-J.
Eroščenko, A. M. see Fradkova, R. E.
— see Haruk, E. V.
Erras, T. 2249
Erskine, W. C., and Galganski, R. T. 3120
Erteld, W. 566
Erusalimskij, V. I. see Mironov, V. V.
Ervasti, 1674, 4908
Esau, K. 2475
Escarpita Herrera, A. 2692
Eschenhagen, V. 2419
Eschner, A. R. 65
Escolano, J. O., and Palmer, E. R. 6693
— see Semana, J. A.
Eshiett, I. T., and Taylor, D. A. H. 6396
Eskandari, F., and Ridé, M. 860
— see Ridé, M.
Eskilsson, S. 6674
Esler, A. E. 2104
Eslyn, W. E. 1553
Español, F. 2642, 3326
Esping, L.-E. 6805
Estep, E. M. see Graham, R. D.
Estes, A. H. see Livingstone, D. A.
Estes, T. K. 4833
— and Pearl, I. A. 1633
Estève, J. 712, 730, 3985, 3992
Etheridge, D E. 5811
— and Morin, L. A. 4096
— see Hocking, D.
Ettling, B. V., and Adams, M. F. 6381
Eusebiu, S. 429
Evangelatova, N. see Ronkov, B.
Evans, D. 1061
Evans, S. R. see Boyer, W. D.
Evans, S. R., Jr. see Ketcham, D. E.
Evaristo, F. Neves 2632
Evcimen, B. S. see Eraslan, I.
Evdokimov, A. M. 2974
Evers, F. H. 279, 1759-61
Evert, F. 6086
Evert, R. F., and Kozlowski, T. T. 2890
— see Derr, W. F.
Ewert, J.-P. 927
Exley, R. R. 1227
Eyde, R. H. 207, 5143
Eyre, S. R. 3622

Faber, P. J. 2079
Fabiszewski, J. 2076
Fager, E. W. 3332
Fahey, D. J., and Laundrie, J. F. 4797
— see Keller, E. L.
Fahlgren, S. 389
Fahn, A. see Werker, E.
Fahlstrom, G. B., Gunning, P. E. and Carlson, J. A. 1475
Fahnestock, G. R. see Lund, H. G.
Fairbairn, W. A. 20
Fairest, R. W. 4796
Fakirov, V., and Canov, C. 365
Fang, W.-P. 3476
Fankhänel, H. 5754
Fanshawe, D. B. 5388
Fanta, B., and Kučera, B. 894
Farb, P., et al. 5234
Farmer, R. E., Jr., and Bonner, F. T. 5317
— and McKnight, J. S. 3488
— see Wilcox, J. R.
Farmer, R. H. 1316
Farquhar, J. D. 1177
Farr, W. A. 2710
Farrar, J. L., and Nicholson, J. J. M. 3402
Farrell, E. P. 6173
Farrell, J. A. K. 5389-90
Farrell, J. R. 5716
Farron, C. see Bamps, R.
Fassi, B. 1987
— and Fontana, A. 1988
— see Wilde, S. A.
Fatzinger, C. W. see Merkel, E. P.
Faulkner, R. 147
Fechner, G. H. 130
Fedde, G. F. 4194
Fedoriščev, T. I., and Rusakova, R. P. 4828
Fedorov, N. I., and Kočanovskij, S. B. 4103
— and Stajčenko, N. I. 5835
— et al. 861
Fedoseev, O. 5740
Fedosimov, A. N. 6073
— see Cuenkov, V. S.
Fedotov, S. S. 573
Fehlhaber, H.-W. see Tschesche, R.
Feihl, O. 3027
— and Godin, V. 6476, 6479
Feiler, A. 1806
Feist, W. C., and Tarkow, H. 2936
— see Tarkow, H.
Felice, M. T. di 524
Feliciani, A. 2467
Fellin, D. G. 4288
Fenaroli, L. 3455
Fengel, D. 1226
Fenicchia, R. A. 3757
Fennell, D. I. see Raper, K. B.
Fenton, R. 2156, 4671
Ferchau, H. A. see Oswald, E. T.
Ferda, J. 5619
— and Pasák, V. 26
Fergus, C. L. see Bell, W. R.
Ferguson, C. W. 5331
Ferguson, E. R see Bower, D. R.
Ferguson, J. M., and Flood, D. T. 1258
Ferguson, R. H. 4903
Fernando, S. N. U. 512
Ferrari, E. see Hellrigl, B.
Ferrari, G. 2973
Ferré, Y. de see Chabrol, P.
Ferreirinha, M. P. 2902
Ferrell, W. K. see Pharis, R. P.
Ferron, P. 6039
Fetisov, M. I. 4056
Ffolliott, P. F., and Barger, R. L. 1557
Fiedler, H. J., and Höhne, H. 5619
— Hülse, R., and Hoffmann, F. 4058
— Wunderlich, H., and Höhne, H. 3345
— see Höhne, H.
— see Lentschig, S.
— see Lyr, H.
Fielding, J. M. 329, 1247, 4525, 4601
Figo, M. de L. N. C. B. P. Morais 2648, 6057
— and Cabral, M. T. 2592
— see Cabral, M. T. E. Cardoso
Filer, T. H., Jr. 2544, 4092
Filho, O. A. Gurgel 440, 567-9
— Leão, E. M., and Pásztor, Y. P. de Castro 490
— and Pásztor, Y. P. de Castro 500
— see Victor, M. A. Moraes
Filip, S. M. 621, 5414
Filipescu, G., and Benche, V. 1420
Filipov, G., and Stojanov, R. 4625
Filipovici, J., et al. 4496
Find, N. I. 4433
Findlay, J. A., Macdonald, D. R., and Tang, C. S. 955
— see Macdonald, D. R.
Findlay, W. P. K. 1502, 3449
Finighan, R., and Liversidge, R. M. 6650
Finley, R. B., Jr. see Mussehl, T. W.
Finn, R. F. 262
Finnegan, R. J. 5051
Finnis, J. M. 5803
Fiorentino, D. C. 2072
Firat, F. 4426
Firsov, A. I. see Anučin, P. I.
Fischer, F. 2106, 6803
Fischer, H. 2620
Fišer, P. N. see Kalunjanc, N. P.
Fišgop, M. S. 1422
Fisk, F. W. see Peacock, J. W.
Fitje, A. 4301
Fitt, R. 1498
Fitzpatrick, H. M. 4849
Flanagan, T. R., and McCormack, M. L. 5607
Flann, I. B., Lamb, F. M., and Neilson, R. W. 3040
Flemming, G. 4989
Flood, D. T. see Ferguson, J. M.
Florescu, I. see Enescu, V.
Florov, R. J. 5250-1
Flotyński, J. 5132
Fober, H. see Giertych, M.
Fogg, P. J. see Kaszkurewicz, A.
Foggie, A. 4847
Foil, R. R., Merrifield, R. G., and Hansbrough, T. 5878
— and Ralston, C. W. 1965
— see Merrifield, R. G.
Foks, J., and Rozmej, Z. 6759
Foley, T. A., and Barber, W. M. 3998
Foliadova, Z. I., and Kiprianov, A. I. 3160
Folsche, G. H. see Bol, M.
Fomin, V. Ja. see Grebenev, L. V.
Fontana, A., and Luppi, A. M. 1982
— see Fassi, B.
Forbes, W. H. B. 668
Ford, J., and Peel, A. J. 112, 5097
Fordham, A. J. 3957
Forman, L. L., and Cutler, D. F. 1927
— see Shaw, H. K. A.
Forman, R. T. T., and Woodwell, G. M. 776
Fors, A. J. 2865
Forš, O. D. 6753
Fortin, A. 3558
Fortin, J. A. 1994
— see Sutherland, J. R.
Foslie, M. 2960
Fossa R., H., et al. 5702
Fossel, A. 2352
Foster, R. C. 1241
— and Marks, G. C. 3562
— see Marks, G. C.
Foster, W. D. 4040
Fouarge, J. 2939

Fouchardière, G. de la 620, 5247
Foulger, A. N. 5942
Fourchy, P. 3504
Fournier, L. A., and Salas, S. 2027, 2049
Fowden, L. 100
Fowler, D. P. 535
Fox, J. E. D. 437, 3646, 5397
Fox, K. M. 59
Fracheboud, M., et al. 6397
Frade, E. Carita 4756
— see Sampaio, F. de Melo
Fradkova, R. E., Eroščenko, A. M., and Petrenko, I. A. 4699
— see Haruk, E. V.
Fraipont, L. 3142
Francia, F. C., and Monroy, M. K. 6624
Francis, C. R. 1395
Francke-Grosmann, H. 70
François, T. 1715
Frank, D., and Low, C. 4665
Frank, J. H. 975, 2634
Franke, W. 100
Frankel, T. H. 6174
Franklin, D. A. 1102
Franklin, J. F., and Krueger, K. W. 5313
— and Mitchell, R. G. 3501
Franklin, R. T. see Lambert, H. L.
Franz, F. 2304, 2746
Franz, J. M., Krieg, A., and Reisch, J. 961, 2630
Fraser, A. I. 3851
— and Gardiner, J. B. H. 4001
Fraser, D. G. 2468
Fratian, A. 5754
Frauendorfer, R. 1189, 2835, 2837-8, 4445
Frauenholz, O. 663
Frayer, W. E. 4387
Fredriksen, R. L. see Rothacher, J.
Freed, V. H. see Norris, L. A.
Freeman, G. H. see Dyson, W. G.
— see Robinson, J. B. D.
Freeman, J. L. see Stone, D. E.
Freeman, S. C. R. see Benzian, B.
Freeman, T. N. 943, 1799, 1804
Freezaillah bin Che Yeom 3697, 5460
Frehner, H.-K. 4976
Freitas, M. C. P. G. de 2878, 3132
French, D. W., Meyer, M. P., and Anderson, R. L. 5810
— see Anderson, N. A.
— see Froyd, J. D.
— see Meyer, M. P.
French, J. R. see Keirle, R.
French, J. R. J., and Johnstone, R. S. 6614
French, W. J., and Silverborg, S. B. 5867
Freudenberg, K. 1207
Freyenhagen, H. see Platzer, H. B.
Fricke, H.-P. 1082
Frid, L. D. 2997
Fries, J. 2790
Frison, G. 2232, 3766, 5521
— see Castellani, E.
Fritz, E. 1681-2
Fritzsche, K. 3540
Fröhlich, H. J., et al. 2174
Frolov, Ju. A. see Terehov, F. I.
Froment, A., and Tanghe, M. 5355
Fromer, R. 6176
Frömsdorf, G. 2424
Frondel, J. W. 1644
Frost, T. R. see Endicott, L. E.
Froyd, J. D., and French, D. W. 5869
Frutiger, H., and Kuster, J. 2417
Frye, R. D. 979
Frykman, B. 3988
Führer, E. 950
Fuisz, J. 2179, 2192, 5514
Fujii, Y., Sugihara, H., and Furutani, S. 3952
Fujimori, T., and Yamamoto, K. 2062
Fujimoto, H see Watanabe, M.
Fujita, S., and Goto, T. 6572
Fukuda, H., et al. 5589
Fukui, H., and Kinura, S. 6429
Fukui, Y. see Hirata, T.
Füllekrug, E. 362
Funaioli, A. 2006
Funk, A. 5863, 5865
Funke, H. see Dietrichs, H. H.
Furjaev (Furyaiev), V. V. 965-6
Furniss, M. M. 2661
Furnival, G. M. 6074
— see Mergen, F.
Furukoshi, T. 1874
Furutani, S. see Fujii, Y.
Furuya, T. 1493
Fushimi, T. see Yamada, T.

Gabeev, V. N. see Krylov, G. V.
Gabriel, W. J. 3428
Gabrielson, F. C. 303
Gaby, L. I. see Vick, C. B.
Gadgil, P. D. 5890
— see Hedderwick, G. W.
Gaelʹ, A. G., and Bondarenko, N. Ja. 2142
Gagarskij, E. see Obermejster, A. M.
Gagnaire, J. 3381
Gagnon, C. 5855-6
Gagnon, G. 4042
Gagnon, J. D. 3868
Gajić, M. R. 1973
— and Kitić, D. 5369
Gál, J. 2328, 5401
Galaktionov, I. I., Vu, A. V., and Osin, V. A. 5654
Galbraith, M. N., and Horn, D. H. S. 2986
Galʹord, J. R. 1033, 2672
Gałganski, R. T. see Erskine, W. C.
Galil, J., and Zeroni, M. 5142
Gallacher, G. 2320
Gallagher, D. G. see Van, S. H.
Galoux, A., Schnock, G., and Grulois, J. 3255, 5351
— see Schnock, G.
Galʹperin, M. I. 4915
Gamalej, Ju. V. 2885
Gambetta, A. M., and Orlandi, E. 3082, 3084
Gambi, G. 524, 638
Gammage, J. L. see Bonner, F. T.
Gandullo, J. M. see Nicolás, A.
Gane, M. 6194
— see MacGregor, J. J.
Ganguli, B. N. 1937
Ganguly, J. K. 5444
Gankov, B., and Urmanov, U. 2859
— et al. 2859
Gansel, C. R. 2173
Ganter, W. 1705
Gara, R. I. 1013-4
— see Gaumer, G. C.
Garasevič, G. I. 6731
Garber, K. 1823
García, J. J. M. 4755
García, J. M. R. see Bryant, B. S.
García Fuentes, M. see Maza, J. de la
García Nuño, J. J. 81
García Salmerón, J. 5044
Garcman, I. N., and Rjabčikov, G. Ja. 5375
Gardiner, J. B. H. see Fraser, A. I.
Gardner, J. A. F. see Redmond, D. R.
Gardner, R. B. 2409
Gardner, R. W. 59
Garelkov, D. see Stefanov, B.
Garlicki, A. M. 3977
— see Calvert, W. W.
Garner, J. H. B. 837
Garratt, G. A. 4940
— see Hunt, G. M.
Garraway, M. O. 4099
Garrett, W. T. see Talerico, R. L.
Garthwaite, P. F. 3333, 4909, 5916
Gashwiler, J. S. 885
Gaškova, A. K. 1275
Gaspar, C. 5363
Gašperšič, F. 393
Gastev, B. G., and Mel'nikov, V. I. 3986
Gatchell, C. J. 899
Gates, D. M. see Miller, P. C.
Gatherum, G. E., Gordon, J. C., and Broerman, B. F. S. 186
— see Broerman, B. F. S.
— see Gordon, J. C.
— see Lorio, P. L., Jr.
Gathy, P. 456
Gaumer, G. C., and Gara, R. I. 2659
Gaussen, H. 1949, 3464, 3536, 5209
— et al. 3259
Gauthier, R. see Grandtner, M.-M.
Gavrilenko, L. N. 340
Gavrilov, V. V. see Maksimov, V. A.
Gay, F. J. 3102
— see Rudman, P.
Gay, L. W. 1739
Gayle, W. B. 6845
Geary, T. F. 5156
— and Burrows, P. M. 6329
Geerinck, D. see Léonard, J.
Geiger, R. 25
Geis, J. W., and Boggess, W. R. 272
— see Boggess, W. R.
Geissen, A. see Kübler, H.
Gejdeman, T. S., Vajnštejn, A. I., and Simonov, G. P. 5371
Gencsi, L. 4606
Gensac, P. 3626, 5348
Gentle, S. W., and Humpreys, F. R. 3862
— see Czarnowski, M. S.
Genys, J. B. 5473
George, C. W., and Hardy, C. E. 4047
Georgescu, C. C., and Tutunaru, V. 223
Georgescu, N. see Chirilă, A.
Georgi, E. 4303
Georgiev, A. see Penev, N.
Georgijevic, E. 4031
Geōrgop[o]ulos, A., and Asteris [Asterēs], K. 2764
— and Tsitsonis [Tsitsōnēs], K. 3717
Georgopoulos, S. G., and Zaracovitis, C. 2475
Gérard, G. 51
Gérardin, V., and Grandtner, M. M. 3638
Gergácz, J. 926, 1867, 5404

Gerhold, H. D. 5149, 5158
— and Soles, R. L. 3402
Gerritsen, H. J., and Oldenkamp, L. 2264
Gersonde, M. 6557
— and Deppe, H.-J. 6563
Geršun, M. S., and Guzeeva, T. N. 799
Gessel, S. P., and Orians, G. H. 2581
— see Cole, D. W.
Gesto, M. D. V., et al. 5114
Geus, H. L. de 5446
Ghazi-Bayat, A. 5989
Ghelmeziu, N. 4531
Ghisi, G. see Currò, P.
Ghosh, D. P. see Rehman, M. A.
Ghosh, R. C. 5444, 5458, 6145
Giacomini, V. 5350
Giannini, R. see Paiero, P.
Gibbs, J. A. see Palmer, E. R.
Gibbs, J. N. 5836-7
Gibson, E. J. 6271
Gibson, H. G. see Parker, H. W.
Gibson, I. A. S. 823, 2498, 2555, 4075, 4944
— Christensen, P. S., and Dedan, J. K. 2557
Gierczak, M. 5823
Giertych, M. 1834, 5138
— and Fober, H. 1885, 5152
— see Chylarecki, H.
Giese, R. L. 1010
— see MacLean, D. B.
— see Merritt, C.
Giffard, P. L. 3470
Gifford, G. F. 530
Gilbert, B. L., Baker, J. E., and Norris, D. M. 6031
— Barras, S. J., and Norris, D. M. 923
Giles, R. H., Jr. see Schenk, J. A.
Gilfedder, J., Keating, W. G., and Robertson, I. 6545
Gillwald, W. 1505, 2859, 4764, 6850
— and Lehmann, G. 4710
Gilmer, W. D. 6678
Gilmore, A. R. 2955, 4358-9
Gilmore, G. see Hunt, E. V., Jr.
Gilmour, C. M., and Allen, O. N. 5020
Gilmour, J. W. 2560
Gindel, I. 1841
Gindin, M. N. see Manžos, F. M.
Gingrich, S. F. 6074
Ginns, J. H., and True, R. P. 4098
Giordano, E. 524, 2009, 3651, 5583
— et al. 524
Giordano, G. 3948
Giulimondi, G. 2209
Giurgiu, V. 4373, 6103, 6142
— and Botezat, T. 6073
Gjems, O. see Dahl, E.
Gjovik, L. R., and Baechler, R. H. 6550
Głąbiński, J. 2704
Gladunov, I. M. 1970
Gläser, H. 1710
Gleed, J. A. 3756
Gleichmann, E. 747
Glenn, R. K. see Leonard, O. A.
Glerum, B. B. see Heinsdijk, D.
Glijer, L. 3004-5
Glišić, M. V. 4031
Głogowska, J., and Olszewski, J. 1781
Glotov, V. V., et al. 4435
Głowacki, S. see Kamiński, E.
Głowiak, B. see Rutkowski, J. D.
Glubrecht, H. see Bors, J.
Göbl, F. 285, 1981, 2074, 5288
— and Platzer, H. 2205
Gochenaur, S. E., and Backus, M. P. 5027
Goddard, R. E. 5158
— see Bengtson, G. W.
Godin, V. see Feihl, O.
Godley, E. J. see Sykes, W. R.
Godnev, L. E. 5576
Godnev, T. N., and Šabel'skaja, E. F. 129
— et al. 5087
Godron, M., and Poissonet, J. 3200
Goebel, C. J , and Deitschman, G. H. 4009
Goes, E., et al. 5407
Goettling, H. 5347
Goff, F. G. 3619
— and Cottam, G. 3620
— and Zedler, P. H. 5346
Gogelein, A. J. F. 5221
Goggans, J. F., and Moore, J. C. 2238
— and Posey, C. E. 5140
— see Hunter, A. G.
— see Posey, C. E.
Gojković, G. see Jodal, I.
Goksøyr, J. see Langvad, F.
Gokulpure, R. S. see Mehra, B. P.
Gol'dberg, A. M., and Zendaev, S. G. 717
Goldberg, I. see Ziemer, R. R.
Golfari, L. 23, 1716, 5463
— and Barrett, W. H. G. 5466
Golikov, A. A. see Levin, E. D.
Golod, D. S. see Jurkevič, I. D.
Golodjaev, G. P. 5375
Golovačev, A. S. 4308
Golubović, U. 4670, 6234-5
— see Plavšić, M.
Golumbic, C. see Hart, J. R.
Golyševa, M. D. see Skvorcov, A. K.
Gómez Nava, M. del S. 5824
Gonet, B. 4521
Gonzalez, V., Brewbaker, J. L., and Hamill, D. E. 1905
Gonzalez, V. R., and Bueno, J. 4701
González F., V. see Bazán de Segura, C.
Goo, M., and Yagi, K. 2176
Good, H. M., and Darrah, J. A. 4726
Goodchild, N. A. 6126
Goodchild, R. 1390
Goode, J. E. see Salter, P. J.
Goodfellow, M. 5023
— Hill, I. R., and Gray, T. R. G. 5022
Goodman, R. N., Király, Z., and Zaitlin, M. 2495
— see Klement, Z.
Goodrick, F. E. see Suddarth, S. K.
Goor, C. P. van 261, 441, 1113, 2478, 5613
Goossens, R. 2693-4, 2753, 2767
Göransson, S. see Ahlér, L.
Gorbačeva, G. N., and Ivanov, S. N. 6675
Gorbačevskij, V. A., and Klyčkov, P. D. 5744
Gorčakovskij, P. L. 2085
Gordeev, A. V., Lugviščik, V. V., and Pilinovič, V. F. 3911
Gordon, D. T. 4052
Gordon, J. C., and Gatherum, G. E. 4347
Gordon, J. C. see Broerman, B. F. S.
— see Gatherum, G. E.
Górecki, Z. 2909
Goring, C. A. I. 2475
Gorlovskij, S. I., and Morozova, S. F. 3131
Gorohovskij, K. F. see Rahmanov, S. I.
Gorovoj, V. L., and Privalovskaja, G. A. 1203
Goršenin, N. M. 6781
Gorzelak, A. 5401
Gossard, S. F. see Adams, R. S.
Göthe, C. J. 2358
Gothe, H. 3409
Goto, K. see Yokota, T.
Goto, T., and Onishi, H. 6408-10
— Sakuno, T., and Onishi, H. 6454
— see Fujita, S.
— see Shinohara, T.
Gottlieb, O. R., et al. 6392
Gottstein, J. W. see Plomley, K. F.
Gottwald, H., and Parameswaran, N. 4503, 6276
— et al. 6255
— see Simatupang, M. H.
Goudie, 3989
Gouger, R. J , and Bray, D. F. 6033
Gould, D. G. 4041
Goulet, M. 4545, 6317
— and Cech, M. 4766-7
— and Ouellet, É. 4568
Govindachari, T. R., et al. 88, 1350, 4834, 6747
Gowin, T. see Żelawski, W.
Goytia, E. see Chudnoff, M.
Graber, R. E., and Thompson, D. F. 3804
Grabovskaja, A. A. 2236
Grâce, J. H. de see Page, D. H.
Gradeckas, A. I. see Ramanauskas, V. I.
Gradwell, G. R. see Varley, G. C.
Graessle, E. see Aufsess, H. von
Graf, D. I., Landers, R. Q., and Poulter, R. W. 5242
Graff, O., and Satchell, J. E. 47-51
Graham, R. D., and Estep, E. M. 3127
— and Mothershead, J. S. 3065
— see Miller, D. J.
Grainger, G. D. 6525
Gram, T. 1171
Grammel, R. 4439
— see Steinlin, H.
Granados, L. A. see Wangaard, F. F.
Grand, L. 1574
Grandtner, M. M. 2097
— and Gauthier, R. 3639
— see Gérardin, V.
Grant, D. W. see Vaughan, G. A.
Grant, P. C. H. 3334
Grant, P. K., Huntrakul, C., and Sheppard, D. R. J. 1335
Grant, S. E. 1404
Grant, W. F. see Brittain, W. H.
Grapini, V. 1266
Grau Fernandez, S. 6822
Gray, J. D., Cochrane, G. C., and Arni, P. C. 6404
Gray, L. E. see Jokela, J. J.
Gray, T. R. G., and Parkinson, D. 5021
— see Goodfellow, M.
Grayson, A. J. 4418
— see Chandras, G. S.
— see Johnston, D. R.

Graziano, M. N., et al. 5081
Greaves, T., et al. 922
Grebenev, L. V., and Fomin, V. Ja. 3141
Grebenkin, V. G. 6820
Grechkin [Grečkin], V. P. 2508
Gréco, J. 1795
Green, A. W., and Alley, J. R. 5449
Green, B. 5519
Green, D. E., and Silman, I. 100
Green, J. M. 6264
Green, L. see Erdmann, G. G.
Greenidge, K. N. H. 254
Greenslade, P. J. M. 3633, 5238
— and Greenslade, P. 5031
Greguss, L. 545
Greguss, P. 2859
Grehov, G. F. 741
Greig-Smith, P., Austin, M. P., and Whitmore, T. C. 358
Greiner, D. see Norris, L. A.
Gremmen, J. 5864
Gressel, P. 6711
Grevatt, J. G., and Wardle, P. A. 503, 2197
Gribkov, E. V. 2340
Grice, R. E., Locksley, H. D., and Scheinmann, F. 6391
Griese, H. 4379, 5235
Grieve, B. J. see Doley, D.
Griffin, A. R. see Jarrold, R. M.
Griffin, B. R., and Wilson, G. L. 4109
Griffin, H. D. 851
Griffin, J. 4614
Griffin, J. R. 5394
— and Cockle, M. T. 5477
Griffiths, K. J. 1053
Grigaljunas, I. see Repšis, I.
Grigorašenko, I. A. 1097
Grigor'ev, A. A. see Berezin, A. M.
Grigorov, P. 2859, 4651
Grigoruca, E. E. see Smirnov, A. V.
Grigsby, H. C. 2196
Grijpma, P. 1946
Grimme, H. 3270
Grin', V. I., and Nefedov, A. A. 5664
Gringof, I. G., and An, P. A. 2064
Grinnell, W. R. 5412
Grišankov, G. E. see Vodop'janova, T. D.
Grisez, T. J. 3889
Grobnic, G., and Duran, V. 2124
Grochowski, W. 2344
Grom, I. I. 650
Groot, R. C. de 4201
Grosenbaugh, L. R. 4974, 6096
Grosscurth, W. 4374
Grosser, K. H. 1687
Grosset, G. E. 2069
Grossmann, H. 6143
Grover, R. 803, 5531, 5533
Groves, K. W. 3981
Groves, R. H. 3440
Grube, A. É., Sanev, V. I., and Paškov, V. K. 1384
— see Kostrikov, P. V.
Grudzinskaja, I. A. 3495
— and Zahar'eva, O. I. 192
Grulois, J. 5353, 5360
— and Schnock, G. 5356
— see Galoux, A.
Grummer, H. J. see Wandt, H.
Grunda, B. 5015
Grzeczyński, T. 4542, 6352
— and Pogonowski, W. 4761
Gualdi, V. 4315, 6116
Güde, H. 663
Gudeski, A. 1865
Gueneau, P. 4488
Guenther, E., et al. 4843
Guerra S., W. 4325
Guerreiro, M. Gomes 2010
Guha, S. R. D., and Kumar, K. 6691
— Singh, M. M., and Gupta, R. K. 6692
- et al. 1582
Guiher, J. K. 6339
Guild, D. W. 5757
Guillemain, J. 3055
Guillemonat, A., and Triaca, M. 6741
Guimarães, R. Foot 3833
Guittet, J. 3277
Gukasjan, A. B. 911
— and Krepkih, L. I. 911
Gukasjan, V. M. 911
Gülçur, F. 3274
Gulej, V. I., et al. 3187
Gulisašvili, V. Z. 3187
Gunda, M. 4438
Gundersen, K. 847
Gunia, S. 1834
Gunning, P. E. see Fahlstrom, G. B.
Gunter, J. E. 6079
Günther, G. 2483
Günther, K.-H. 764
— see Hesmer, H.
Günther, R., and Wachendorff, R. 4055
Gupta, B. P. see Jaitly, V. P.
Gupta, R. C. see Jain, N. C.
Gupta, R. K., and Dutta, B. K. 5201
— see Guha, S. R. D.
— see Masani, N. J.
Gupta, R. P. see Bhatnagar, N. S.
Gupta, S K., and Babu, R. 3318
Gur'janov, M. Ja. 699
Gurov, A. F. 6073
Gürsu, I. 4530
Gürth, P. see Schmidt-Vogt, H.
Gusejnov, A. M., and Gusejnova, L. A. 641
Guseva, A. N. 5841
Gustavsson, B. see Hansson, J.-E.
Gusteleva, L. A. see Isaev, A. S.
Guth, E. B. de. 6767, 6771
Gutiérrez Oliva, A., and Plaza Pulgar, F. 2926
— see Elvira Martin, L.
Gutierrez de Solanos, V. see Lotti, A.
Gutschick, V. 3811
Guttenberg, S. 4675
Guzeeva, T. N. see Geršun, M. S.
Gyekis, K. D. 6792
Gyurkó, P. 3556

Haantjens, H. A., et al. 5014
Haasemann, W. 2953
— see Blossfeld, O.
Haasis, F. A. see Bell, D. K.
Haavisto, V. F. see Vincent, A. B.
Habeck, J. R. 3644
Häberle, S. 2386, 6172
Hablützel, H. 1415
Hache, F. 5401
Hachenberg, F 739
Hackbarth, W. see Otto, D.
Hackl, W. 751
Hacskaylo, E., and Vozzo, J. A. 1990
Hada, S. 6085
Hadders, G. 5485
Haddock, P. G see Smith, J. H. G.
Hadfield, E. H. see Acheson, E. D.
Hadley, E. B., and Woodwell, G. M. 5775
Hadlington, P. see Campbell, K. G.
Hadžibejli, Z. K. 5671
Haeruman, H. 4365
Hafley, W. L. see Hart, C. A.
Hagen, K S., and Bosch, R. van den 3324
Hagenstein, W. D. see Wackerman, A. E.
Hagman, M. 1868, 1872
Hagner, S. P. 5614
Haibara, K. see Aiba, Y.
Haider, A. 4324
Hailey, J. R. T., Hancock, W. V., and Walser, D. C. 6473
Haines, L. W., and Pritchett, W. L. 476
Hair, D. 4460
Hajdu, E. 3974
Hakkila, P. 1090, 2701, 2954
— and Laiho, O. 5830
Halbwachs, G. 767
— and Kisser, J. 4022
Hall, D. O. 2248
Hall, G. S. see Saunders, R. G.
Hall, O. F. 4428, 6074
Hall, S. W. see Morris, L. J.
Haller, E. see Loetsch, F.
Hallin, W. E. 1742
Hallock, H. 4607
Halls, L. K., and Alcaniz, R. 5061
— see Ripley, T. H. 6074
— see Stransky, J. J.
Halperin, J. 2596
Halupa, L. 5404
Halvorson, C. H. see Storm, G. L.
Hama, T. 2576
Hamill, D. E. see Gonzalez, V.
Hamilton, J. F., Jr. see Shafer, E. L., Jr.
Hamilton, J. R., and Wendel, G. W. 6340
— see Saucier, J. R.
Hamm, Đ., and Lovrić, N. 6639
Hammer, J. G., and Broerman, F. S. 3814
Hammermaster, E. T. see McIntosh, D. H.
Hamrick, J. L., III see Conkle, M. T.
Han R., M., and Micheli S., H. 6551
Hanawa, J. 5130
Hancock, W. V. see Chow, S.-Z.
— see Hailey, J. R. T.
Handiside, J. 6174
Handley, R., et al. 5095
Hankey, J. D. see Thompson, N. S.
Hanmamedov, K. M. see Chanmamedov, K. M.
Hannah, P. R. 6132, 6135
Hannon, N. J. see Clarke, L. D.
Hansbrough, J. R. 2550
Hansbrough, T. see Foil, R. R.
— see Merrifield, R. G.
Hanschke, D. 5481
Hansen, E. D. see Schroeder, H. A.
Hansen, R. P., and Boderick, D. F. 5072
Hanslian, L., and Kadlec, K. 1362, 2990
Hanson, J. B., and Benjamin, D. M. 2684
Hansson, J.-E., Kylin, B., and Gustavsson, B. 5680
Hanstein, U. 1691, 6832
Hanuš, S. see Říbal, M.

Hanzadjan, Ž. S. 5647
Hanzl, R. see Nováková, E.
Hara, T., et al. 281
Harada, H. 6284
— and Côté, W. A., Jr. 1235
— Davies, G. W., and Plomley, K. F. 6456
Haraguchi, T. 6602-3
Haralamb, A. 2113
Harap, A. 1441
Hard, J. S 902
Hardie, A. D. K. see Mostyn, H. P.
Harding, D. J. L. 47
Hardy, C. E. see George, C. W.
Harin, N. G., and Prokudin, Ju. A. 1150
Häring, F. 4468
Haritonov, G. A. 642
— and Močalkin, L. S. 3899
Haritonov, V. V. see Pominova, G. I.
Haritonova, E. P. 4994
Haritonova, N. Z. 909
Harker, M. G. 4859
Harlan, R. L. 3263
— and White, D. P. 5039
Harlow, W. M., and Bishop, A. H. 2934
Harman, D. M., and Kulman, H. M. 1003, 4249-51
— see Kulman, H. M.
Harner, F. see Treshow, M.
Harold, M. R. see Wheeler, E. Y.
— see Yaptenco, R. C.
Harr, R. D. 3313
Harris, J. M. 2312, 2919, 2951
— and Polge, H. 2949
Harris, J. W. E. 998
— and Wood, R. O. 4207
Harris, W. V. 3103
Harrison, D. 387
Harrison, D. J. 1808
Harshbarger, J. C., and Taylor, R. L. 3324
Hart, C. A., and Hafley, W. L. 6281
— and Swindel, B. F. 1228
— and Thomas, R. J. 4511
— see Snyder, J. L.
Hart, G. E., Jr. 3315
Hart, J. B., Jr., Cunningham, R. A., and Leaf, A. L. 1122
Hart, J. H., et al. 5854
Hart, J. R., and Golumbic, C. 499
Hartge, K. J., and Bailey, F. 3264
Hartl, H. 3624
Hartler, N. 6674
Hartley, C. W. S. 3471
Hartman, G. B. 2720
Hartman, L., and Weenink, R. O. 3163
Hartmann, F. K. 1764
— and Jahn, G. 2082
Hartung, W. 3846
— and Koch, H. 4440
Hartwig, F. see Wiebecke, C.
Hartwig, G. L. F. 1454-5, 3052
Hartzell, A. 70
Haruk, E. V., Fradkova, R. E., and Eroščenko, A. M. 4552
— and Vologdin, A. I. 4694
Harvey, A. E. 2537, 5881
Harvey, G. M. 869-70
— see Wright, K. H.
Harvey, G. T. 1803
— and Stehr, G. 1801
Harvey, M. J., and Packard, R. L. 4165
Harvey, R. see Lantos, G.
Hasebe, H. see Aiba, Y.
Hašek, J. 5762
Hasel, K. 1655, 6214
Hashimoto, Y. see Hukuhara, T.
Hashitani, S. see Inagawa, G.
Hashizume, H. 5110, 5497, 5499
Hassan, E. 5925
Hassid, W. Z. 100
Hata, K. see Sogo, M.
Hatano, K. 2045, 3739, 3744
— and Nakamura, Y. 2044
Hatchell, G. E. 550
Hatcher, R. J. 3878
Hatiya, K. see Tadaki, Y.
Hatt, J.-M. see Colbrant, P.
Hattemer, H. H. 3434, 5478
Hauff, R. 3177
Haugberg, M. 3822, 5471, 5562
Hauge, T. 1000
Hausburg, H. 3177
Hausenbichl, K. 4686
Hauser, A. 3184, 6775
Hauxwell, D. L. 3539
Havel, J. J. 4360
Haveraaen, O. 3858
Havkina, N. V. 5375
Hawkins, B. T. see Page, M. W.
Hawkins, P. J. 311
— and Muir, J. D. 3661
Hay, G. W. see Scott, S. J.
Hayashi, A., Kakizawa, Y., and Hirayama, T. 2980
Hayashi, D., and Tochigi, T. 4658, 6478
Hayashi, S., Nishimoto, K., and Kishima, T. 2946
Hayden, M. V. see Dwyer, J. D.
Hayes, A. J. 330, 3300
Haygreen, J. G. see Ryan, T. R.
Healy, V. M. 6244
Heaman, J. C. 3425
Heard, W. L. 5045
Heaslip, M. B. 4027
Heath, G. W., and Arnold, M. K. 41
— see King, H. G. C.
Heath, J. see Bocock, K. L.
Heather, W. A. 2573, 5818
Hedbring, O., and Åkesson, J. 3932
Hedderwick, G. W. 632, 801
— and Gadgil, P. D. 2181
Hedemann-Gade, E. 2550, 5427
Hedlin, A. F. 951, 4179
Hedlin, C. P. 4546
Hedquist, K.-J. 4255
— and Ringselle S. 6048
Hedrick, D. W. see Young, J. A.
Heebink, B. G. 3143
— and Hefty, F. V. 6719
— and Lewis, W. C. 4817
Heebink T. B. see Kurtenacher, R. S.
Heede, B. H. 3993, 5752
Heftmann, E. 2247
— Sauer, H. H., and Bennett, R. D. 5076
Hefty, F. V. see Heebink, B. G.
Heger, B. see Hofman, J.
Hegg, K. M. 1145
Hegre, A. 4162
— and Langhammer, A. 5424
— see Børset, O.
Heidmann, L. J. 468
Heikinheimo, L. 4908
— and Kunnas, H. 3231
Heikurainen, L. 1777, 2277
Heimburger, C. 3402
Hein, G. see Kübler, H.
Hein, J. 77
Heine, E. W. 3354
Heine, R. W. see Morrison, T. M.
Heinrichs, E. A. 4216
Heinrichs, H. 1200
Heinsdijk, D., and Glerum, B. B. 2722
— et al. 1008
Heinsdorf, D. 600-1, 2288, 3346, 5619-20
Heiskanen, V. 3128, 4786
Heit, C. E. 2183
Hejmanowski, S., Dąbrowski, T., and Stawecka, W. 2299
Hejnowicz, A. 5152
Hejnowicz, Z. 1834, 2889, 2914, 4516
Helińska-Raczkowska, L. see Perkitny, T.
Hellawell, C. R. 2918
Hellinga, G. 2108
Helliwell, D. R. 2820
Hellmers, H. 1955
— see Pharis, R. P.
Hellrigl, B., and Ferrari, E. 4419
Hellum, A. K. 2042, 3605, 6141
Hemingway, J. C. see Kupchan, S. M.
Hemingway, R. J. see Kupchan, S. M.
Hempel, G., and Lockow, K.-W. 4342
Henderson, C. S. see Reynolds, E. R. C.
Hendricks, L. T. 4470
Hendrie, R. see Aldhous, J. R.
Hengst, E. 3684
Henkel, F. see Knitsch, H. W.
Henkel, W. 5401
Henley, J. W., and Hoopes, J. M. 1423
Henning, N. see Loetsch, F.
Henningsson, B. 1514-6
Henry, B. W., and Wells, O. O. 832
Henry, S. M. 70
Hensel, J. S. 2371
Hepper, F. N. 5232
Hepting, G. H. 3218
— see Powers, H. R.
Herbin, G. A. see Dyson, W. G.
Hering, T. F. 1770
Hermann, R. K. 558, 3823
— and Doerksen, A. H. 5517
— and Lavender, D. P. 4012
— see Bickford, M.
Hermansen, N. K. 2836-7, 4446
— et al. 2835
Hernandez S., R. see Vela G., L.
Herrebout, W. M. 5926
Herrera Autter, S. 829
Herrick, I. W. see Raff, R. A. V.
Herrick, O. W., and Christensen, W. W. 1205
Herring, H. G. 5037
Herrmann, S. 3408
Heslop-Harrison, J. 100
Hesmer, H., and Günther, K.-H. 3835
Hesp, T. see Bird, F.
Heth, D., Blum, R., and Wirzberg, B. 2144
— see Karschon, R.
Hetherington, J. C. 4341
Hett, J. M., and Loucks, O. L. 5610
Hewitt, E. J. see Bond, G.
Heybroek, H. M. 2529
Heyligers, P. C. 384, 6800
Heyrovsky, L. 5048
Hibben, C. R. 882
Hickok, K. H. see Hutnik, R. J.
Hide, R. H. 1084
Hightree, P. E. see Johnson, F. A.
Higuchi, T., Shimada, M., and Watanabe, K. 6298
Hilbrand, H. C. 1442

Hildebrandt, G. 2792
— and Schindler, C. 2801
Hiley, W. E. 1156
Hilf, H. H. 2107, 2362
— and Meyer, R. 6192
Hill, I. R. see Goodfellow, M.
Hill, P. see Riney, T.
Hiller, C. H., and Brown, R. S. 2901
Hillis, W. E. 1830
Hillman, W. S. 100
Himel, C. M., and Moore, A. D. 957
Himelick, E. B. see Neely, D.
Hinds, T. E., and Peterson, R. S. 865
Hino, I., and Katumoto, K. 2566
Hinselmann, D., and Rasch, E. 1616
Hintikka, V., and Näykki, O. 43
Hippeli, P. 3861
Hippoliti, G. 672, 3961
Hirata, T., Abe, H., and Fukui, Y. 1500
Hirayama, T. see Hayashi, A.
Hirose, Y., and Nakatsuka, T. 1339
— et al. 6732
— see Yanagawa, T.
Hirov, A. A., and Nevzorov, V. M. 5168
Hitchings, R. G. see Namkoong, G.
Hittmeier, M. E. 1284
Hobbs, L. H. 4631
Hočevar, S. 6593
Hochmut, R. see Sindelář, J.
Hock, L. B. 6793
Hockenjos, F. 3666
Hocking, D. 827, 5826, 5891
— and Etheridge, D. E. 4145
Hocking, H. 4277-8
Hodges, J. D., and Lorio, P. L., Jr. 5106
Hodgson, A. 4033
Hodgson, B. S. 4046
Hodgson, G. L., and Donaldson, C. 814
Hodorevskij, V. A. 518
Hoerber, G. F. see Bryant, B. S.
Hof, T. 6590
Hoffmann, F. 563, 3770-1
— see Fiedler, H. J.
— see Scheumann, W.
Hoffmann, G. 1817, 3521
— and Lyr, H. 5260
— and Steiner, J. 5754
— and Veldmann, G. 5235
— see Lyr, H.
Hoffmann, J. 5153
Hoffmann, K. 2175, 3412, 5145. 5235
— and Scheumann, W. 3413
— see Poller, S.
Hoffmeister, H., et al. 2985
Hofman, J. 1305, 3513, 3685
— Vacková, M., and Heger, B. 427
Hofmann, G. 5235
Hofmann, W. 362
Hohenlohe-Waldenburg, F. K. zu 3967
Höhne, H., and Fiedler, H. J. 602, 2287, 5619
— see Fiedler, H. J.
— see Reissig, H.
Hoke, B. G. 5705
Hol'kin, Ju. I. see Varaksina, T. N.
Holland, D. A. 6127
Hollier, D. 4614
Hollingworth, G. 2366
Hollis, C. A. see Tepper, H. B.
Holloway, C. W. 5911
— see Swift, L. W.
Holman, J. 5045
Holmen, H. see Tamm, C. O.
Holmes, B., and Kabos, R. O. M. 6372
Holmes, F. W. 4125
Holota, J., and Osuský, A. 3150
Holst, M. J. 3402
— see Yeatman, C. W.
Holtam, B. W. 4859, 6583
— et al. 4859
Holtmeier, F.-K. 2039
Holttum, R. E. 1918
Holubčik, M. 2172
Holway, J. G. see Scott, J. T.
Holz, D. 4534
Holzer, K. 2051, 2074
Homuth, O. 3838
Hon, L. Y. 2866
Honda, N., Wong, W. H. C., Jr., and Nelson, R. E. 2157
— see Wong, W. H. C., Jr.
Honer, T. G. 2709
Hong, S. H. see Koo, K. H.
Hong, W. K., and Soon, T. G. 3064
Hook, D. D., LeGrande, W. P., and Langdon, O. G. 3678
— and Stubbs, J. 304, 5158
— see Sucoff, E.
Hoopes, J. M. see Henley, J. W.
Hopewell, W. W. see Randall, A. P.
Hopkins, B. 5385
Hopkins, E. R. see Perry, D. H.
Hopkins, W. S. see Arnold, R. K.
Hoppe, E. 6176
Horák, J. 5006
Hori, T. 3973
Horioka, K., Tominaga, H., and Chiba, Y. 6565
Horn, D. H. S. see Galbraith, M. N.
Horne, A. R. 3972
Horowitz, A., and Baum, B. 3392
Horowitz, S., and Buchanan, M. 5
Horvath, E. (Proszt, S.) 5518
Hošek, E. 426
Hoşgören, U. 4309
Hoshi, T. 1389, 6261
Hosius, D. 895
Hosner, J. F., and Madgwick, H. A. I. 1852
Höster, H.-R., and Liese, W. 1240
— see Liese, W.
Hostettler, F. D. see Seikel, M. K.
Hou, D. 208
Hough, A. F. 452
Houwink, R., and Salomon, G. 6448
Hovi, L. 4952
Howard, B. H. 5542
Howard, M. see Butcher, J. A.
Howard, P. J. A. 50
Howard, R. A. see Wilson, B. F.
Howe, J. P. 4609
Howick, C. D. 6619
Howie, E. L. 4042
Howse, J. S. 3237
Hoyle, R. J. 6343
Hrdy, I. 3055
Hristov, C., and Vălčev, V. 2859
— see Vălčev, V.
Hristov, S. 5730
Hrulev, V. M., and Zajvij, V. A. 1401
Hrycyk, R. 3954
Hu, H.-H. 3481
Huang, S.-M. see Resch, H.
Huang, Y.-S. see Wu, C.-Y.
Hubbes, M., and Astous, R. d'. 4136
— see Lanier, L.
Huber, B. 6156
— and Merz, W. 1292
Huddleston, E. B., and Anton, A. 4557
— and Bootle, K. R. 4669
Hudeczek, F. 4449
Hudson, D. W. 3991
Hudson, M. S. 6552
Hueck van der Plas, E. 1466
Huell, K. 6214
Huff, J. L. 5705
Huffman, D. see Cech, M. Y.
Hugentobler, U. H. 1252
Huggard, E. R., and Owen, T. H. 1714
Hughes, E. L. 3670
Hughes, J. F. 3681, 6327
— see Kozlowski, T. T.
Huikari, O., and Paarlahti, K. 3530
Hukuhara, T., Akutsu, K., and Watanabe, H. 914
Hukuhara, T., and Hashimoto, Y. 970
Hülse, R. see Fiedler H. J.
Hulută, C., and Lăzărescu, C. 415
Humble, R. S., McCutcheon, J. O., and Miller D. G. 3022
Humpherson, P. G. see Robards, A. W.
Humphrey, B. E., and Dummer, P. C. R. 3787
Humphreys, F. R., and Humphreys, N. 1344
— see Czarnowski, M. S.
see Gentle, S. W.
— see McColl, J. G.
Humphreys, N. see Humphreys, F. R.
Hunecke, D. see Wiebecke, C.
Hunt, E. V., Jr., and Gilmore, G. 553
Hunt, G. M., and Garratt, G. A. 4690
Hunt, I. S. 2868
Hunt, W. A. 2410
Hunter, A. G., and Goggans, J. F. 6420
Hunter, J. P. S. 3334
Huntrakul, C. see Grant, P. K.
Huntzinger, H. J. 5557
Hunziker, T. 6803
Hurd, P. D., Jr. see Buker, H G.
Hurlimann, J. H. see Raabe, R. D.
Hurrell, H. G. 5055
Hurst, G. W. 4987
Huršudjan, P. A. 2002
Hurtado, I. de 193
Huse, S. 3205
Huss, E. 2184
Hussey, N. W. 4284
Huszár, E., and Szász, T. 5733
Hutadjulu, S. 4319-20
Hutchings, S. S. see Mason, L. R.
Hutchinson, I. D. 4883
Hutchinson, J. 1916
Hutchison, O. K. 4905
Hutnik, R. J., and Hickok, K. H. 2059
Hutorcov, I. I. 1780
Hutorščikov, I. S., Bujnickaja, M. I., and Zorina, G. A. 4573
Hütte, P. 2422, 5758
Hutton, R. S. see Rasmussen, R. A.
Huuhtanen, J. 1571
Huynh-Long, V. 6265
Hyland, F. see White, P. R.
Hyppel, A. 2518
Hyun, J.-S. see Kim, C.-W.

Iacovlev, A. 1183
Iancu, A., and Tocan, M. 1573
Ibraimova, I. K. see Tarbinskij, Ju. S.
Icekson, A. F., and Tamm, G. J. 1440
Idemudia, O. G. see Ekong, D. E. U.

Ievin', I. K., et al. 688
Igmándy, Z. 4739
— and Págony, H. 4740, 6591
Ihara, N., and Inoue, Y. 5641
Iiyama, K., Nakano, J., and Migita, N. 1323
Ikeda, S., and Miyata, K. 5727
Ilić, M. 1407, 3109, 4757
Iliescu, V. see Davis, G. P. M.
Iliev, A. see Duhovnikov, Ju.
Iliev, T., et al. 2859
Il'in, B. A. 1193
Il'inskij, A. I. 1042
Ille, R. 6299
Illies, Z. M. 5184
Illy, G. see Polge, H.
Ilmurzyński, E., and Warecki, W. 2381
— see Czereyski, K.
Ilves, E., Sarv, A., and Valk, U. 5336
Ilvessalo, M., and Ilvessalo, Y. 1676
Imada, M. 5402
Imam, S. M. see Malik, M. N.
Imamura, H., Kurosu, H., and Takahashi, T. 6387
Inagawa, G., Ito, E., and Hashitani, S. 324
— see Ito, E.
Inal, S. 4930
Ingebo P. A. see Davis, E. A.
Ingestad, T. 2217
Inoue, M. see Amemiya, S.
Inou(y)e, M. 2615, 2652
— and Morimoto, K. 6008
Inoue, Y., Yano, T., and Sekiya, Y. 5640
— see Aramoto, M.
— see Ihara, N.
Insua, A. see Cadahia, D.
Inverardi, R. 4792
Ionov, B. D., and Ionova, T. B. 3224
Irošnikov, A. I. 3586
Irving, R. see Rudloff, E. von
Irving, R. M. 5257
— and Lanphear, F. O. 1956, 3524
Isaac, I. 2475
Isaev, A. S. 907
— and Gusteleva, L. A. 911
Isaeva, L. N., and Brjuhanova, Ė. B. 4556
Isaka, S. see U(y)emura, T.
Ishibashi, H. 5042
Ishihara, S., and Maku, T. 6578
Ishii, H. 5024
Ishii, K., Watanabe, S., and Tsuji, T. 3944
— see Tsuji, T.
— see Watanabe, S.
Ishikawa, H. see Kawamura, Y.
Islas Salas, F. 2675
Isomäki, O. 1631, 3025
Istas, J. R., and Raekelboom, E. L. 4793
Isyumov, N. 6439
Ito. E., Inagawa, G., and Morii, T. 1119
— Inagawa, G., and Yamagiwa, I. 434
— see Inagawa, G.
Ito, K. 834
— Kobayashi, T., and Shibukawa, K. 5886
Ivănescu, D. 235
— see Bălănescu, E.
Ivanjuta, V. M. 6073
Ivanov, G. I. 5375
Ivanov, G. M. 911
Ivanov, Ju. M. see Ivanov, Yu.
— and Leparskij, L. O. 6358
Ivanov, S. N. see Gorbačeva, G. N.
Ivanov, V. A. 5711
Ivanov, Yu. [Ju. M.] 6303
Ivanova, I. T. see Rozenberg, V. A.
Ivanova, N. E. 5319
Ivens, G. W. 5794
Ivory, M. H. 836, 2556, 5892-3
Iwakawa, M., et al. 5171
Iwashita, M. 1603
— and Ugawa, N. 1611
Iwata, Z., Koyama, R., and Katagiri, K. 2631
Iyengar, A. V. V. 4826
Iyer, J. G., and Trautmann, W. L. 5532
— see Trautmann, W. L.
Iyppu, A. I. 5429
Izjumskij, P. P. 3187
Izmodenov, A. G. 3587

Jaakkola, S. 2777
Jablokov, A. A. 3695
Jablokov, A. S. 6781
Jablonski, E. 3492
Jacjuk, A. I., and Popovič, V. V. 3032
Jack, W. H. 2727, 2830
Jackson, B., Locksley, H. D., and Scheinmann, F. 1349, 4591
Jackson, L. W. R. 141-2
Jackson, W. B. 3870
Jacob, W. 689, 5401
— et al. 684
Jacobs, M. R. 4472
Jacobsen, M. W. 2137
Jacobsen, W. B. G. 5274
Jacquiot, C., and Lapetite, D. 4779
Jagfeld, P. see Egner, K.
Jahn, E. 2677, 4737
Jahn, G. see Hartmann, F.-K.
Jahn, H., Nespiak, A., and Tüxen, R. 362
Jährig, M. 5213
Jaime Fanlo, F. 571
Jain, H. C. see Sekhar, A. C.
Jain, J. K. see Pande, J. N.
Jain, M. B. see Kaul, R. N.
Jain, N. C., and Gupta, R. C. 6534
— Gupta, R. C., and Shah, R. S. 1427
— et al. 6474
— see Rawat, B. S.
Jaitly, V. P., and Gupta, B. P. 6532
Jakimenko, N. A. 917
Jakobsons, A. see Arman, V.
Jakovleva, L. V. 533
Jakuszewski, T. 2327
Jalaluddin, M. 4117
James, G. A. 4917
— and Taylor, G. D. 3200
James, M. A. see Cambie, R. C.
Jančařík, V. 2564
— and Temmlová, B. 2563
Jančo, J. 6646
— and Lútočka, L'. 5706
Janeschitz, H. 709
Jänichen, H. 3177
Jankiewicz, L. S. 1834
Jankowski, A. 3933
Janov, V. V. 3054
Jansen, E. see Nagel-de Boois, H. M.
Jansen, E. C., and Schoenfeld, P. H. 3895
Janson, L. 2233, 3789
Janssen, C. R. 3640
Januško, A. D. see Zaharov, V. K.
Janzen, D. H. 2028
Jarck, W. 5719
Járó, Z. 2433, 5261
Jaroslavcev, G. D. 310, 3572
— see Višnjakova, T. N. 1257
Jarrett, J. M., and Williams, A. H. 5082
Jarrold, R. M., and Griffin, A. R. 6173
Jarvi, R. A. 6450
Jarvis, J. M., and Cayford, J. H. 3671
— et al. 391
— see Bella, I. E.
— see Cayford, J. H.
— see Tucker, R. E.
Jarzembowski, R. see Babicki, R.
Jaswal, A. A. see LaCroix, L. J.
Jaworski, J. 644
Jayaweera, D. M. A. see Thanikaimoni, G.
Jayme, G., and Torgersen, H. F. 1321
Jędlowski, E., and Minerbi, B. 1939
Jędrzewska, H. 3181
Jeffers, J. N. R. 3217, 4973
Jeffers, R. M. see Stairs, G. R.
Jefferson, J. H. see Whatley, B. T.
Jegorova, S. V. see Perel', T. S.
Jehle, R. see Knell, G.
Jekić, M., and Maksić, S. 492
Jelinek, T. 3000
Jena, K. E. von 5758
Jeník, J. see Mensah, K. O. A.
Jenkinson, J. L. 266
Jenks, O. C. 3609
Jensen, A., Stephensen, K., and Løken, A. 2034
Jensen, A. T. see Petersen, L.
Jensen, K. F. 4729, 5092
Jentys-Szaferowa, J. 3478
Jentzsch, H. 4032
Jeremić, J. 3871
Jerkeman, P. 3095
Jermy, T. 4178
Jérome, R. 1670
Jessome, A. P., and Leach, K. E. 6521
Jewel, F. F., and Mallett, S. L. 4139
— and Walker, N. M. 866
— see Meteer, J. W.
Jha, R. F. see Roy, R. P.
Job, J. G. see Elder R. A.
Jodal, I. 4237
— and Gojković, G. 4066
Johansen, R. W. 2466
Johanson, P. E. 4466
Johanson, R. 1469, 3057
Johansson, B. 389
Johns, S. R., and Lamberton, J. A. 1640
— Lamberton, J. A., and Occolowitz, J. L. 3168
— Lamberton, J. A., and Sioumis, A. A. 1641
Johnson, A. L. S. see Weir, L. C.
Johnson, D. B. see Seikel, M. K.
Johnson, F. A., Dahms, W. G., and Hightree, P. E. 2719
Johnson, F. D. see Schenk, J. A.
Johnson, F. M. see Moore, W. H.
Johnson, H. J. 5644
Johnson, J. W. 2969, 3074
— and McElwee, R. L. 3812, 5175
— see Albert, T. J.
— see Kunesh, R. H.
Johnson, P. C. 1017
Johnson, R. L. 5527
Johnson, V. C. 1448
Johnsson, H. 146, 458, 5493

Johnston, D. R., Grayson, A. J., and Bradley, R. T. 1166
Johnston, J. S. 2398, 3966, 5714
Johnston, W. F. 5480
Johnstone, R. C. B. 5919
Johnstone, R. S. 3059
— see Keirle, R.
Joiner, J. N., and Conover, C. A. 5522
Jokel, J. 1256
— and Markuš, V. 2971
Jokela, J. J., and Gray, L. E. 3433
Jolov, N. 666
Jones, A. B. 6174
Jones, A. R. C. 2818
Jones, B. E. 3703, 3709
— and Wightman, J. M. 6095
Jones, B. L. 5938
Jones, D. S. 1479
Jones, E. W. 5237
Jones, J. R. 4362-3
Jones, L. 487, 3799, 5507, 5566
— see Beland, J. W.
Jones, N. 1201, 3403
Jones, T. 900, 4944
Jong [Chung], S.-C., and Ch'en, C.-C. 2504
Jongen, P. 5012
Jordan, J. S., and Sharp, W. M. 5556
Jordan, R. A. 2196
Jorgensen, J. 3906
Jørgensen, T. 2836, 6172
— and Opheim, T. 2837
Jorgensen, J. R. 1746
— and Shoulders, E. 287
Jorova, K. see Donov, V.
Josifov, N. [A.] see Kjučukov, G. [B.]
Jotwani, M. G., and Sircar, P. 1643
Jovančević, M. 213
Jovanović, B. 5333
— and Stanković, D. 6152
— and Tucović, A. 5244
— see Tucović, A.
Jovanović, S. see Bunuševac, T.
Jović, N. 5008
Joy, A. R. 3227
Józefaciuk, J. 2347
Judin, V. G. 2188
Jug, D. 5741
Juillet, J. 4280
— and Laviolette, R. 4208
— see Veronneau, G.
Jülich, L. 3955
Jumppanen, P. see Ylinen, A.
Jung, L. see Mayer-Wegelin, H.
Juon, P. 1688
Jurášek, L., Sopko, R., and Váradi, J. 6607
— Váradi, J., and Sopko, R. 3081, 4733
Jurča, J., and Vaščček, F. 5603
Jurčenko, G. I. see Čumin, V. T.
Jurčiško, V. N. see Ljuboslavskij, V. D.
Jurdant, M. 3514
Jurgensen, M. F. 1769
Jurkevič, I. D., and Golod, D. S. 328
— and Petrovskij, P. Ja. 1136
— et al. 6781
Juškov, Ju. M. see Manakov, V. A.
Jussila, R. see Norteva, P.
Jusupov, A. 6077
Juutinen, P. 5983, 6052
Juvonen, K. 3037

Käärik, A. 4724
Kaasen, N. O. 5684
Kabos, R. O. M. see Holmes, B.
Kaburagi, J. see Nakano, T.
Kabzems, A., and Senyk, J. P. 3198
Kačalov, P. P. 5748
Kaddah, M. T. 3290
Kadlec, K. see Hanslian, L.
Kadota, M. 264
Kagawa, T. see Tadaki, Y.
Kahala, M. 691, 2388
— and Salminen, J. 5721
Kaikini, N. S. 5658
— and Deshmukh, D. K. 5429
Kailidēs (Kailidis), D. S. 2528, 2595, 5943
Kajrjukštis (Kairiūkštis), L. A. 5425-6
— and Matulionis, A. A. 3874
Kajsin, A. A. 651
Kakizawa, Y. see Hayashi, A.
Kaku, S. see Salt, R. W.
Kalandra, A. 2523, 5754
Kalašnikov, A. F. 6781
Káldy, J. 695
— and Marosvölgyi, B. 3947, 5703
Kalinić, M. 5009
Kalinkov, V., and Dobrinov, I. 5166
— et al. 2859
Kalipsiz, A. see Eraslan, I.
Kallio, T. 843
Kalnin'š, A. I., Svikle, D. Ja., and Zanderson, Ja. G. 3172
Kalpagé, F. S. C. P. 271
Kaludin, I. see Kaludin, K.
Kaludin, K. 4835
— and Kaludin, I. 94
Kalunjanc, N. P., and Fišer, P. N. 4824
Kamat, L. K. 1065
Kametkar, L. R. see Prakash, I.
Kamilovski, M. 2599
Kamiński, A. 3897
Kamiński, E. 2384
— and Głowacki, S. 3914
— and Kowalski, J. 2382
Kamitani, M. see Tanaka, A.
Kammeyer, H. F. 3758
Kamp, A. 733
Kampe, R. C., and Stluka, R. T. 1442
Kamra, S. K. 2193
Kamyšev, N. S. 367
Kanaya, N., and Yamada, T. 2965
Kang, K. W. 5215
Kangas, E., Perttunen, V., and Oksanen, H. 6027
— et al. 6026
Kangas, Y. 1675
Kangur, R. 728
Kano, T. 1558, 3123
Kantola, M. 2819
Kaplan, M., and Stephen, A. M. 1651
Kapoor, J. N. 4159
Kappen, L. 556
Kapur, K. K., Vashist, V. N., and Atal, C. K. 3922
Kapustinskaitė, T. 572
Karadočev, P. 2859
Karahasanović, A., and Rajman, V. 3146
Karai, G. 1842
Karaivanova, S. 2859
— et al. 2859
Karakis, K. D. see Bedrikovskaja, N. P.
Karandina, S. N. 5579
Karanjgaokar, C. G., Radhakrishnan, P. V., and Venkatamaran, K. 2987
Karg, W. 2606
Karlikowski, T. 787, 2449, 4032
Karlsen, G. G. 6518
Karnik, M. G., Bhatia, K., and Lal, J. 3165, 6739
Karpačevskij, L. O. see Perel', T. S.
Karpenko, A. S. 5212
Karpov, V. G. 2011
Karschon, R., and Heth, D. 1784
— and Zohar, Y. 5379
Karth, S. W. 4602
Karyšev, V. E., and Kravcov, M. V. 645
Käse, H. 4032
Kas'janov, F. M. 647
Kassas, M., and Zahran, M. A. 3632
Kästner, W. see Dassler, H.-G.
— see Enderlein, H.
Kaszkurewicz, A., and Fogg, P. J. 3607
Katagiri, K. see Iwata, Z.
— see Koyama, R.
Kató, F. 4101, 5839
Kato, S. 713, 2400, 3211, 4450
Katsuta, M. 163-4
Katumoto, K. see Hino, I.
Kaufman, H. F. see Cole, L. W.
Kaul, O. N., and Srivastava, P. B. L. 5068, 5271
Kaul, R. N. 309
— and Jain, M. B. 1137, 2145
— see Bhimaya, C. P.
Kauman, W. G. and Kloot, N. H. 6251
Kaune, P. see Becker, G.
Kaurač, I. A., and Rahceenka, I. N. 2017
Kaushik, R. C. 5591
Kawada, H., Maruyama, A., and Kinugasa, T. 260
Kawaguchi, M., Nakamura, G., and Ohtani, R. 6570
Kawaguchi, T. see Ono, S.
Kawahara, T. see Tsutsumi, T.
Kawakatsu, K. see Manabe, D.
Kawamatu, S. 5121
Kawamura, I., and Bland, D. E. 1319
Kawamura, Y., Mamada, S., and Ishikawa, H. 6463
— and Tamura, F. 6305
Kawana, A., et al. 5616-7
— see Aiba, Y.
Kawarada, Y. see Nakagawa, H.
Kawasaki, T. 5978
Kawase, M. 3385
Kawecka, A. 5152
Kay, D. see Butterworth, D.
Kay, J. A., and Aiyanyo, I. 6436, 6528
— and Burgess, H. J. 1392
Kayama, T., et al. 1576
Keating, W. G. see Gilfedder, J.
Keays, J. L. 6114, 6689
Kedharnath, S., and Upadhaya, L. P. 190
— see Rawat, M. S.
Kedrov, G. B. 2893
Kędzierski, Z. 3772
— and Pławińska, W. 3775
Keefe, T. L. 5128
Keet, J. D. M. 2310
Kefeli, V. I., and Tureckaja, R. H. 1856
Kehr, E. 1598
— Riehl, G., and Macht, K.-H. 4813
— and Schölzel, S. 1599, 6716
Keil, O. see Nyyssönen, A.
Keino, K., and Togashi, I. 1511

Keirle, R., French, J. R., and Coulson, W. B. 5790
— and Johnstone, R. S. 5699
Keister, T. D. 616, 6074
— Crow, A. B., and Burns, P. Y. 5631
Keith, C. T., and Côté, W. A., Jr. 6277
Keith, J. O. 918
Keleberda, T. N. 37
Kelih, I. 5743
Keller, E. L., and Fahey, D. J. 1575, 6698
Keller, H. M. 1788, 6803
Keller, T. 1846, 3778, 5765
Kellison, R. C. see Roberds, J. H.
Kellogg, R. M. see Tamolang, F. N.
Kemfert-Lindlow, see Ziegler, H.
Kemov, A. S. 6427-8
Kempe, C. 5713
Kenady, R. M. 4979
Keniston, R. F. see Young, J. A.
Kenk, G. K. 4329
Kennedy, B. H. see Peacock, J. W.
Kennedy, R. V. see Balatinecz, J. J.
Kennedy, R. W. 6366
— and Swann, G. W. 6335
— see Chang, C. I.
Kennel, R., and Wehrmann, J. 2286
Kenstavičjus, I. I. 4416, 6073
Kent, J. A., et al. 3068
— see Loos, W. E.
Kepler, J. A., et al. 848
Kerbes, E. L. see McIntosh, J. A.
Keresztesi, B. 1898, 5400, 5441
Keresztesy, L. O. 1451
Kerfoot, O. 3311
Kerner, G. 6548
Kerr, A. J. 6174
Kerr, C. H. 668
Kerruish, C. M. 3969
Kerscher, E., Böhner, G., and Schneider, A. 4774
Kershaw, K. A. 5386
Kervina, L. 1477, 1524
— see Ditrich, B.
Kessler, K. J., Jr. 6070
Kessler, W. 4133
Ketcham, D. E., Wellner, C. A., and Evans, S. S., Jr. 6184
Kevo, R. 4031
Khalsa, H. G., Nigam, B. S., and Agarwal, P. N. 1523
Khan, A. A. see Malik, M. N.
Khan, A. G. 280
Khan, M. see Sheikh, M. I.
Khan, M. A. W. 544, 1120, 3786
— and Yadav, J. S. P. 5592
Khan, S. N. 3086
Kharabanda, B. C. see Lahiri, A. N.
Kiełczewski, B., and Bałazy, S. 1007
— see Bałazy, S.
Kiellander, C. L. 481
— and Nilsson, E. 1883
Kielland-Lund, J., Jr. see Dahl, E.
Kiil, A. D. 2446-7
Kikkawa, J., and Webb, L. J. 3200
Kiljakov, A. M. 1108
Killian, H. 3223
Kim, C. H. see Kim, S. W.
Kim, C. J. 883, 5907
Kim, C. M., and Change, N. K. 3542
Kim, C.-W., and Hyun, J.-S. 967
Kim, D. C., and Lee, C. K. 1094
— and Lee, H. K. 1132
— Lee, H. K., and Kim, T. O. 1100
— and Yoo, J. K. 1086
Kim, S. I. 604
Kim, S. W., Kim, C. H., and Kim, W. K. 910
Kim, T. O. see Kim, D. C.
Kim, W. K. see Kim, S. W.
Kim, Y. L. see Ko, J. H.
Kimball, K. E. 6643
— and Lowery, D. P. 3113
Kimber, P. C. 2317
Kimland, B., and Norin, T. 1648
Kimmey, J. W. see Wicker, E. F.
Kimura, C., and Sugaya, S. 1932
Kimus, J. 2318
Kin, Z., and Witkowski, C. 3151
Kinelska, J. see Żelawski, W.
King, H. G. C., and Bloomfield, C. 4999
— and Heath, G. W. 3279
King, K. F. S. 4853, 6819
King, T. J., and Silva, L. B. de 6755
King, W. E. 2663
Kingston, R. S. T. see Sadoh, T.
Kininmonth, J. A. see Williams, D. H.
Kinloch, D., and Mayhead, G. J. 1765
Kinnaird, J. W. 5237
Kinsley, H., Jr., and Pearl, I. A. 89
Kinsley, H. B., Jr. 3356
Kinsley, L. S., and Bartoo, R. A. 2748
Kinugasa, T. see Kawada, H.
Kinura, S. see Fukui, H.
Kippen, F. W. see Aldred, A. H.
Kiprianov, A. I. see Foliadova, Z. I.
Kipruškin, A. N. see Demin, K. A.
Kira, T., and Shidei, T. 2055
Király, Z. see Goodman, R. N.
Kirchner, W. 2629
Kirk, D. G. 6701
Kirk, K. see Rafalski, H. J.
Kirkwold, L. L. see Benson, R. E.
Kirov, A. M. 2341
Kirov, K. 2859
Kishima, T. see Hayashi, S.
Kislova, T. A. 3996
Kiss, L. 5524, 5929, 6010, 6038
Kiss, R. 6076
Kisser, J. 1207
— see Halbwachs, G.
Kistenfeger, J. 4932, 5704
Kitaev, I. V., et al. 1414
Kitahara, K., and Suzuki, T. 6629
— and Tsuchiya, K. 3018
Kitao, K. 2982
Kitching, R. 1783
Kitić, D. see Gajić, M. R.
Kivistö, A. see Liiri, O.
Kjučukov (Kütschukov), G. B., and Josifov, N. A. 2859, 4818-9, 6271
— and Šiškov, I. T. 2859
Klar, G. V., and Van'kov, P. I. 1618
Klebingat, G. 796, 4054
Klein, J. I. 3429
Klein, R. M. 423
Kleinert, T. N. 6699
Kleinhout, J. 5982
Kleinschmit, J., and Knigge, W. 152
Klement, Z., and Goodman, R. N. 2475
Klepac, D. 4961
— and Mas Porras, J. 1719, 6161
Klier, G. see Bester, H.
Klier, H. 749
Kline, D. E. see Bernier, G. A.
Kline, G. N., and Sopper, W. E. 5623
Kline, L. N., and Rudinsky, J. A. 1022
Klinger, B. see Oshima, N.
Klingström, A. 2541
Klomp, H. 5981
Kloot, N. H. see Kauman, W. G.
Klötzli, F. 6803
Kluge, E. 4093, 5754
Klyčkov, P. D. see Gorbačevskij, V A.
Knapp, A. B. 3044
Knapp, E. see Dittmar, O.
Knapp, R. 3576
Knell, G., Weiss, H., and Jehle, R. 6209
Knežević, I. 3871
Knežević, M. 2859
Knigge, W. see Kleinschmit, J.
Knight, H., and Duffy, P. J. B. 4977
Knight, H. A., and McClure, J. P. 3199
Knipling, E. B. 3360
Knitsch, H. W., and Henkel, F. 6707
Knoerr, K. R. 62
Knopf, H. E. 901
Knudsen, P. 4747
Knuffel, W. E. 2200
Ko, J. H. 1066
— and Kim, Y. L. 1062
Kobachidze [Kobahidze], D. N., et al. 4175
Kobak, K. I., and Slemnev, N. N. 1849
Kobayashi, F. 5972
— and Murai, M. 1072
Kobayashi, K. 5376
Kobayashi, T. 2567, 5198
— see Ito, K.
Koberle, M., and Šípoš, J. 1547
Kobyliński, F. 4780
Kočanovskij, S. B. see Fedorov, N. I.
Koch, A. 70
Koch, H. see Hartung, W.
Koch, J. 759
Koch, P. 1207, 1438, 4654, 6515
Koch, W. 5101
Kochman, J., and Sikora, A. 5909
Kocięcki, S. 5152
Kocijančič, M. 5678
— and Kotnik, M. 5677
Kočkin, M. A. 3289
Kocoń, J. 2976-7, 4519-20, 4579
Koczwański, S. 2416
Kodama, A. 5189
Koehler, W. 2602
Koelling, M. R., and Blum, B. M. 3921
Koenig, R. L. see Saylor, L. C.
Koenigs, J. W. 4142
Koev, D. see Stojanov, V.
Koga, T. see Nanasawa, N.
Kohán, Š., and Leontovyč, R. 754
Kohli, R. C. see Kumar, V. B.
Kohlmeyer, J. 1508
Kohno, N. A. 584, 3692
Kohout, R. see Materna, J.
Koizumi, C. see Yamaguchi, H.
Kokocinski, G. H. 549, 3797
Kolb, H. see Egner, K.
Kolbah, D. see Djurbabić, B.
Kolbe, M., and Westfelt, L. 1338
Koldanov, V. Ja. 339, 4851
Koleják, M., and Drgoň, G. 1609
Koleoso, O. A. see Abramovitch, R. A.
Kolesnikov, I. V., and Bykov, V. D. 1162
Kolesnikov, N. N. see Buharin, P. D.
Kolesnikova, T. D. 3611
Kolev, B. see Nikolov, S.
Kolev, N. 537
Kolev, N. D. 539
Koliščuk, V. G. 1126
Kollmann, F. 2859
— and Kufner, M. 1589
— Schneider, A., and Serrand, W. 4543

Kollmann, F. F. P. 1207, 1426
— and Sachs, I. B. 1269
— Schneider, A., and Böhner, G. 1546
Kollmann, R. 111
Kolomiets [Kolomiec], N. G. 2678
Kolominov, V. P. 677
Kolonits, J. 5928
Kolosova, M. I. 2391-2
Kolovskij, R. A. see Sudačkova, N. E.
Kolowski, E. 3181
Kolster, H. W. 4067, 5560
Koltzenburg, C. 2993, 4604, 6419
Komarov, I. A., and Mamedov, F. M. 3783
Komendar, V. I. 2071
Komlenović, N. 5520
— see Martinović, J.
Komšilov, N. F., et al. 2348
Kondakov, Ju. P. 964
Kondo, K. see Yamai, R.
Kondo, M. see Minami, K.
— see Yoshimoto, T.
Kondo, T. see Ogiyama, K.
Kondor, A. 756
Konev, G. I. 2765
König, E. 2587
Konnov, A. A. 369
Konoplev, P. S., and Potjarkin, L. P. 2999
Konstantinov, R. G. 6750
Konstantinov, V. K. 1741
Koo, K. H., and Hong, S. H. 1243
Kopecky, F. 1898, 2026, 2179-80, 5181
Koperin, F. I., and Korobov, V. V. 6469
Kopitović, S. 6712
Koplin, J. R. 4260
Kopp, D. see Eberhardt, E.
Korablev, A. I., and Berg, L. V. 725
Korczyk, A. 3480
Kordiš, F. 5728
Koreškov, B. E. 6758
Korger, M. 4773
Kormanik, P. P., and Brown, C. L. 3583, 5321-2
— and Porterfield, E. J. 529
— see Brown, C. L.
Korobov, V. V. see Koperin, F. I.
Korolev, V. V. see Dyskin, B. M.
Korol'kov, I. I., Lihonos, E. F., and Šahanova, R. K. 3149
Korotkov, A. M. see Atrohin, V. G.
Korotkov, N. V. see Čalov, N. V.
Korotkova, S. A. 4352
Korotov, S. Ja. see Uškova, E. V.
Korsuň, F. 6094
Körting, A. 1525, 1534
Košel'kov, S. P. 1968
Koshijima, T., and Muraki, E. 6577
Košik, M., et al. 2859, 6401-2
Kossinskaja, I. S. 831
Köster, P. see Kühne, H.
Kostermans, A. J. G. H. 217
Kostina, A. E. see Portjanko, V. F.
Kostjuk, Z. V. 5454
— see Roik, Ja. V.
Köstler, J. N. 4846, 4976, 6172
— Brückner, E., and Bibelriether, H. 5292
Kostov, P. 5661
Kostrikov, P. V., and Grube, A. É. 4623
Kotheimer, J. B. 4014
Kotnik, M. see Kocijančič, M.
Kotok, E. S. see Lowery, D. P.
Kotov, M. M. 2240
Kotzegger, J. 663
Kourtis, M. see Asterēs, K.
Kourtz, P. [H.] 2445, 2458
Kovàcs, A. 5535
Koval'čuk, L. M., and Senčilo, Ju. Ja. 6494
Kovalenko, Z. M. see Rysin, L. P.
Kovrigin, A. I. 714
Kowalkowski, A. 258
Kowalski, J. 3941
— see Kamiński, E.
Koyama, R., and Katagiri, K. 5994
— see Iwata, Z.
Kozak, A. see Cserjesi, A. J.
— see Salamon, M.
Koževnikov, A. M. see Moiseenko, F. P.
Koževnikova, S. K. 1960
Kozlik, C. J. 1535, 3112, 4768, 4770, 6632
Kozlov, V. N., Bronzov, O. V., and Utkina, E. A. 1622
Kozlovskaja, L. S. 45, 5030
— and Belous, A. P. 45
— and Zagural'skaja, L. M. 45, 55
Kozlovskij, V. B. and Pavlov, V. M. 4397
Kozłowska, C. 2545
Kozlowski, T. T. 132
— and Clausen, J. J. 560
— Hughes, J. F., and Leyton, L. 2915
— and Sasaki, S. 804, 5801
— Sasaki, S., and Torrie, J. H. 806, 2481
— see Chaney, W. R.
— see Clausen, J. J.
— see Dickmann, D. I.
— see Evert, R. F.
— see Quirk, J. T.
— see Sasaki, S.
Kozmal, F., et al. 2859
Kozubov, G. M. 1863
Kozuka, M. see Tomita, M.
Krahmer, R. L., and Sieben, H. U. 4562
— and Snodgrass, J. D. 1307
Kral, F. 150, 3424
Kramer, H. 2261
Kramer, W. see Schmidt, G.
Krames, U. 1625
— see Neusser, H.
Krannich, K. see Möller, F.
Krapfenbauer, A. 1971, 3546
Krasavcev, O. A. 246, 5255
Krăstanov, K., et al. 4391
— see Nedjalkov, S.
Kratz, W. see Stegmann, G.
Kraŭčanka, L. U. 2275
— see Nespjarovič, M. D.
Kraus, A. 6489
Kraus, J. F. 1895
Krauss, H. H. 5619
Krăuter, G. 5401, 5626
Kravcov, M. V. see Karyšev, V. E.
Krebill, R. G. 5872
— see Laycock, W. A.
Krebs, H. 6729
Kreeb, K. 3370
— and Bogner, W. 1858
Krepkih, L. I. see Gukasjan, A. B.
Kreutzer, K. 598
Kreutzinger, M., and Matusz, S. 682
Kriebel, H. B. 1892
Kreig, A. see Franz, J. M.
Krieger, H. 1167
Kriek, W. 2151-4, 3698-3702, 5461-2
Krier, J. P., and River, B. H. 6083
Krinard, R. M. see Toole, E. R.
Kring, J. S. 5585
Krishna, K. 5046
Krishnam, P. S. see Prakash, S.
Krishna Murthy, A. V. R. G. 1191
Krishnan, M. 3200
Krishnaswami, S. P. see Chawla, J. S.
Krishnaswamy, V. S. 5622
Kristensen, P. K., and Vălčec, V. 2859
Krivec, A. 5735
Kříž, M., and Syrovátka, K. 2402
Krjukova, L. M., Muhambetžanov, K. K., and Nazarova, L. F. 5770
Krohalev, A. K. 2461
Królikowski, L., and Ciok, B. 2432
— and Strzelec, Z. 2295
Krønfuss, H. 2074
Kroth, W. 2826, 6172
— see Speer, J.
Krotov, L. N., and Oslonovič, V. N. 4769
Krotov, V. R. see Torgonskij, M. N.
Krstinić, A. 1899, 3437, 5178
Kruckeberg, A. R. 265
Krueger, K. W. 2119, 3376
— and Trappe, J. M. 116
— see Franklin, J. F.
Kruel, W. 5754
Krugman, S. L., and Critchfield, W. B. 4065
Krygier, J. T. see Brown, G. W.
Krylov, A. G. 2773, 6781
— and Gabeev, V. N. 3186
Krylov, N. I., and Olovenikov, G. B. 2335
Krzoska, Z. see Babicki, R.
Krzysik, F. 2849, 2859, 3181
Kubiak, M. 1517
— see Rogaliński, K.
Kubíková, J. 290, 5822
Kubinsky, E., and Sochor, M. 6472
Kübler, H., and Geissen, A. 4683
— and Hein, G. 6348
— and Sell, J. 1592
Kubota, M. see Abe, I.
Kucaba, S. see Szymkiewicz, B.
Kucak, A. A. see Mankevič, L. A.
Kucakova, V. E. see Sterlin, D. M.
Kučera, B. see Fanta, B.
Kučera, L., and Kučera, J. 4515
Kuck, A. M., et al. 6756
Kuczewski, J. 2407
Kudaševa, R. F. 5151
Kudela, M. 5754, 5957
Kudinov, A. A. 4627
Kudinov, M. A. 3745
Kudler, J. 2621
Kudzinau, M. A. 2189
Kufner, M. see Kollmann, F.
Kühne, H. 1075, 1586
— and Köster, P. 5766
— see Sell, J.
Kuijt, J. 5124
Kukk, A. 3615
Kukovickij, F. 6122
Kulagin, V. P., and Sudarev, A. R. 2336
Kulicke, H. 4163
Kulikov, V. I. see Bardyšev, I. I.
Kulkarni, D. H., and Seth, S. K. 5448
Kulkarni, S. M. 2351
Kul'kevic, A. Ja., and Alsups, I. A. 6728
Kulman, H. M. 936, 949
— and Harman, D. M. 2654
— see Berisford, C. W.
— see Harman, D. M.

Kulow, D. L., and Tryon, E. H. 6138
Kumar, D., et al. 5526
Kumar, K. see Guha, S. R. D.
Kumar, R. N. see Narayanamurti, D.
Kumar, S. see Purushotham, A.
Kumar, V. B. 6353
— and Kohli, R. C. 4539
Kumazaki, M. 1680
Kumin, G. see Schwotzer, W.
Kummerow, J., and Schmidt, H. 2229
Kuner, M. 755
Kunesh, R. H. 6365
— and Johnson, J. W. 6437
Kunkel, H. 4197
Kunnas, H. J. 3231
Künstle, E. see Mitscherlich, G.
Kunt, A. 4031
Kuntz, J. E. see Phelps, W. R.
Kunze, J. H. see Brown, E. E.
Kuonen, V. 745
Kupchan, S. M., Hemingway, R. J., and Hemingway, J. C. 1636
Kuprienko, L. I. see Sosnina, A. A.
Kurath, E. see Blythe, R.
Kurčeva, G. F. 1752
Kurdjuk, M. G. 3503
Kurir, A. 4226, 5988
Kurkela, T. 4291
Kuroki, Y. 191
Kurosu, H. see Imamura, H.
Kuroyanagi, S. 3343
Kürschner, K. 4572
Kurtenacher, R. S., Heebink, T. B., and Dunmire, D. E. 1457
Kurth, A. 6803
Kurth, E. F. 1632
Kuruvilla, K. 3634
Kusch, D. S. 1004
Kussmaul, H. see Zöttl, H. W.
Kuster, J. see Frutiger, H.
Kuteev, F. S. 2645
Kuthy, T. 694, 5701
Kutney, J. P., and Rogers, I. E. 6745
Kütschukov, G. B. see Kjučukov, G. B.
Kutuzov, P. K. 2787
Kuusela, K. 4420, 4908, 6175
Kuznecov, F. I. 1677
Kuznecov, N. N. 4198
Kuznetsova [Kuznecova], T. S., et al. 343
Kverno, N. B. see Dodge, W. E.
Kwiatkowski, A., and Rozmej, Z. 4583
Kylin, B. see Hansson, J.-E.
Kyte, C. T. 6542
Kytmanov, A. V. 4708

Laar, A. van 2766
Laar, G. van see Vredenburch, C. L. H. van
Laar, H. J. van de 519-20
Laasasenaho, J. see Vuokila, Y.
Laatsch, W. 1966
— and Zech, W. 5248
Laballe, G. 4468
Labau, V. J. 4300
LaBonte, G. A., and Lipovsky, L. J. 2683
Labroue, L., Legris, P., and Viart, M. 3258
Lacasse, N. L. 5859
Lacaze, J. F. 447-8, 2161, 3716
— and Tomassone, R. 455
Lachance, D. 4138
Lachance, R. A. 3968
Lackner, E. see Petermann, H.
LaCroix, L. J., and Jaswal, A. A. 2048
Ladejščikova, E. I. 1855
Laflamme, Y., and Lafond, A. 760
Lafond, A. see Laflamme, Y.
— see Wilde, S. A.
Läg, J. 3286, 6100-1
Lah, E. I. see Zidkov, V. G.
Laharrague, P. 2131
Lahiri, A. N., and Kharabanda, B. C. 3367
Lahiri, K. L. 3656
Laidlaw, R. A. 4712
— Pinion, L. C., and Smith, G. A. 1491
— see Packman, D. F.
Laiho, O. 1993
— see Hakkila, P.
Laine, L. 5851
Laing, C. L. 144
Laing, F. M. see Marvin, J. W.
Lajrand, N. I. 2992
Lakatoš, B. K. 1555
Lal, J. see Karnik, M. G.
Lallemand, P., et al. 2112
Lalymenko, N. K. 551
Lamb, A. F. A. 3509-10, 3680, 4719, 5443
— and Cooling, E. N. 5146
Lamb, F. B. 4483
Lamb, F. M. 2872
— see Flann, I. B.
Lambert, H. L., and Franklin, R. T. 4189
— and Wilson, E. T. 5939
Lamberton, J. A. see Arthur, H. R.
— see Johns, S. R.
Lämmke, A. 1470
Lamont, J., Jr. 6496
Lamontagne, Y. see Campagna, J.-P.
Lamp, I. 663
Lampert, H. 1613, 6722
Lamprecht, H. 180
Landbeck, H., and Bandt, W. 3193
Landers, R. Q. see Graf, D. L.
Landschütz, W. 2386, 5674
Lane, C. L., and Witcher, W. 5279
Lane, D. A. 6851
Lane, J. M. 656
Lang, J. M., and Miskus, R. P. 2605
Lang, W. see Mitscherlich, G.
Langdale-Brown, I. 3608, 4924
Langdon, O. G. see Hook, D. D.
— see Trousdell, K. B.
Lange, P. W. 6674
Lange, S. 785, 4032
— see Sandermann, W.
Langenheim, J. H. 657
Langer 3967
Langhammer, A. see Børset, O.
— see Hegre, A.
Langlet, O. 2159
Langner, G. see Willeitner, H.
Langvad, F., and Goksøyr, J. 3089
Lanier, L. G. 2561
— and Hubbes, M. 4147
Lanly, J. P. see Lepitre, C.
Lanner, R. M. 300
Lanphear, F. O. see Irving, R. M.
Lantos, G. 3047
— and Harvey, R. 1437
Lantratova, A. S. 3690
Lanz, W. 4069
Lapetite, D. see Jacquiot, C.
Lapietra, G. 2623
Lapin, P. I. 3691
LaPlante, M. G. see Brown, E. E.
Lapšin, Ju. G. see Ugolev, B. N.
Larbey, D. W. see Peachey, J. E.
Larcher, W. see Pisek, A.
Larguia, A. 5467-8, 6199
Larina, T. G. see Skrjabina, A. A.
Larjuhin, G. A., et al. 3665
La Roi, G. H. [, III]. 2096
Larsen, E., and Cromer, D. A. N. 5146
Larsen, F. E. 2253
Larson, J. E., Pieper, G. R., and Ratsch, H. C. 5965
Larson, M. M. 248
Larson, W. H. 2472
Larsson, U. 2828
Laskeev, P. H. 1569
Laškevič, V. I. 3888
Last, H. see Tschesche, R.
Lattke, H. 3785
Lau, R. see Leike, H.
Lauenstein, E. 4032
Laughlin, K. 3485
Laundrie, J. F. 4798
— see Fahey, D. J.
Laura, M. P. 5773
Laurent, J. E. 4187
Laurie, M. V. 3216, 4949
Lavallée, A., and Lortie, M. 5832
— see Davidson, J.-G.
Lavarenne, S. 5297
Lavender, D. P. see Hermann, R. K.
Laverne, X. 241
Laviolette, R. see Juillet, J. A.
— see Sharma, M. L.
Lavrenko, E. M., and Ponjatovskaja, V. M. 2053
Lavrinenko, D. D., et al. 605
Lavrova, K. G. 2013
Law, M. see Simms, D. L.
Ławniczak, M. 2964
— see Lutomski, K.
Lawrence, D., and Dyson, P. J. 4436
Lawrence, R. H. see Brown, C. L.
Lawrie, J. J. 3216
Lawson, A. A. 4331
Lawson, E. R. 5034
Lawton, R. M. 2095
Laxamana, M. G. see Siriban, F. R.
Lay, D. W. 1811, 3342
Laycock, W. A. 2099
— and Krebill, R. G. 863
Lăzărescu, C. 3438, 5543
— et al. 459, 2168
— see Hulută, C.
Lazarev, A. S. 6204
Lazarev, N. A. see Volkov, A. D.
Lazda, Ė. Ė., and Odincov, P. N. 6291
Leaf, A. L., and Leonard, R. E. 2060
— see Arnott, J. T.
— see Hart, J. B., Jr.
— see Marion, G. M.
Leahu, I. 6160
Leão, E. M. see Filho, O. A. Gurgel
Leary, G. 4533
Leather, R. I. 5816
Lebacq, L., and Dechamps, R. 6256
Lebedenko, L. A. 1845, 1908
Lebedeva, N. V., and Afonina, V. V. 2278
Lebedinskij, V. V. see Ageenko, A. S.
Lebkov, V. F. 1079
— and Pravdin, A. M. 1079
— et al. 1079
Lebkova, G. N. 838, 875

Lebrun, C. 3734
Lechner, W. 3723
Leclercq, J. 3917
Leclère, A. 6826
Ledig, F. T. 5162
Lee, C. H. 162
Lee, C. K. see Kim, D. C.
Lee, H. K. see Kim, D. C.
Lee, I. D. G. 1453
Lee, Y. 4404
Lee, Y. H. 1304, 4599
Leech, R. H. 603
Leeflang, K. W. F. see Minderman, G.
Leenhouts, P. W. 1925
Lees, H. 5020
Leete, E. 100
Legault, A., Rousseau, J., and Cartier, Y. 3515
Leger 815
LeGrande, W. P. see Hook, D. D.
Legris, P. see Labroue, L.
Lehký, M., and Bezáková, M. 6246
Lehmann, G., and Rafalski, H.-J. 6553
— see Gillwald, W.
Lehmann, J. 4424, 6176
Leibundgut, H. 4976
Leike, H. 125
— and Lau, R. 124
Leikola, M. 21
Leistner, O. A. 5391
Lejhtling, R. A. 4622
Lejkin, A. Z. see Sterlin, D. M.
Lekander, B. 3328
Lele, D. 6634
Lembcke, G. 5235
Lemke, J. 4343
— and Meixner, J. 2761
Lemoine, B. 2756
Lemoine-Sébastian, C. 5139, 5141
Leney, L., and Moir, R. H. 6510
— see Meyer, R. W.
— see Saleh, T. M.
Lengvel, G. 798
Lengyel, P. 3136
Lentschig, S., and Fiedler, H. J. 33
Lenz, O. 4010
Leon, A., and Borges, L. C. 3137
Leonard, B. E., and Sherratt, H. S. A. 3169
Leonard, D. E. 2638
Leonard, J., and Geerinck, D. 3459
Léonard, J.-P. 6783
Leonard, O. A., Bayer, D. E., and Glenn, R. K. 809
Leonard, R. E. see Leaf, A. L.
Leonardis, R. F. J. 1716
Leoni, A. 5787
Leonov, L. V. 1386, 4728
Leontovyč, R. see Kohán, Š.
LePage-Degivry, M.-T. see Bulard, C.
Leparskij, L. O. see Ivanov, Ju. M.
Lepitre, C., and Mariaux, M. 6647
— Mariaux, A., and Lanly, J. P. 4778
Lepoutre, B. 5558
Lerch, B. see Lüdtke, M.
Leškovceva, I. I. 126
Leslie, A. J. 4956, 6801
Leśniak, A. 4221
Lesnov, P. A. see Timofeev, A. F.
Leštarski, H. see Stojanov, Ž.
Lester, D. T. 5488
— and Rehfeldt, G. E. 3416
Le Tacon, F. 5032
Letham, D. S. 100
Letouzey, R. 373
Leukens, U., and Maydell, H.-J. von 4868
Leven, A. A., and Williams, J. A. 3317
Levi, M. P., and Cowling, E. B. 6604
— Merrill, W., and Cowling, E. B. 6605
Levin, E. 1446
Levin, È. D., and Čuprova, N. A. 3157
— Rinkevičus, A. A., and Golikov, A. A. 3156
Levingston, R. 445
Levitin, N. 3119
— and Bigras, G. 4589
Levno, A., and Rothacher, J. 3323
Lévy, G. 5063
Levy, J. F. 3055, 3083, 6608
— and Olofinboba, M. 3078
Lewis, J. H., and McDermid, R. W. 3209
Lewis, R. A., and Ward, W. W. 2749
Lewis, W. C. 1588, 6367
— see Heebink, B. G.
Lewis, W. H. 196
Leyton, L. 1835, 5268
— and Armitage, I. P. 5194
— see Kozlowski, T. T.
— see Reynolds, E. R. C.
Lhotsky, J. 5619
Li, C. L. 4600
Li, C. Y., et al. 4116
Liani, A. 2212, 3767
Libby, W. J. see Cobb, F. W., Jr.
— see Conkle, M. T.
— see Linhart, Y. B.
Liben, L. 5202
— and Dechamps, R. 1222
Licman, È. P. 1405
Liebeneiner, E. 2457
Liebold, E. 615, 1141
Liemann, F. see Lötschert, W.
Liese, W. 1207
— and Ammer, U. 1504
— and Bauch, J. 1236, 2942
— and Eckstein, D. 6600
— and Höster, H.-R. 1254
— Höster, H. R., and Richter, J. 4495
— see Bauch, J.
— see Höster, H.-R.
Lightle, P. C., Andrews, S. R., and Mouser, W. E. 4073
Lihonos, E. F. see Korol'kov, I. I.
Liiri, O. 6713
— and Kivistö, A. 6512
— and Metsä, A. 1610
Liittschwager, J. M., and Tcheng, T. H. 2811
Likens, G. E., et al. 273, 3549
Lin, R. T. 1271
Lin, T.-H. see Wu, C.-Y.
Lindauer, I. E. 5395
Lindberg, H. 6208
Linde, R. J. van der 2637
— and Voûte, A. D. 981
Lindeckert, R. 4941
Lindeman, C. F. 1172
Lindenhayn, K. see Rieche, A.
Lindley, D. K. 6173
— and Philip, M. S. 4444
Lindo, L. S. 4004
Lindpere, A. 5010
Lindquist, J. L. 2707
— and Palley, M. N. 1129
Lindström, I. 2843
Lindström, J.-O., and Westfelt, L. 4587
Lines, R. 446, 2158, 2162, 5472, 6779
Linhart, Y. B., and Libby, W. J. 3427
Lin'kov, I. M., and Svencickij, G. V. 6511
Linnamies, O. 6823
Linnard, W. 479
Linzon, S. N. 4166, 6069
Liphschitz, N., and Waisel, Y. 4386
— see Arzee, T.
— see Waisel, Y.
Lipovsky, L. J. see LaBonte, G. A.
Lippay, H. see Štefan, K.
Lipps, E. L. 2102
Lisenkov, A. F. 3802
Lisland, T. 5684
Lišter, G. R., et al. 3366
Listov, A. A. 779
Little, C. H. A. 3380
Little, E. L., Jr. 5205
— Little, S., and Doolittle, W. T. 169
Little, J. D. 6845
Little, S. 3677
— and Somes, H. A. 5804
— see Little, E. L., Jr.
Littleford, T. W. 6345-7, 6359, 6517
— and Rovner, B. 6355
Litvak, P. V. 3693
Litvinkov, S. S. see Nartov, P. S.
Livanov, A. P. see Židkov, V. G.
Liverovskij, A. A., et al. 3159
Liversidge, R. M. see Finighan, R.
Livingston, G. K., and Chin, K. K. 174
Livingstone, D. A., and Estes, A. H. 334
Ljalina, M. F. see Buharin, P. D.
Ljamin, V. A., and Bol'šakova, N. A. 3155
Ljubič, D. D. 6073, 6154
Ljuboslavskij, V. D., and Jurčiško, V. N. 4628
Ljuljka, B. 3126
Ljungström, P.-O. 51
Lloyd, H. G. see Taylor, J. C.
Lloyd, P. S. see Peterken, G. F.
Lochman, J., and Melicharová, A. 1807
Locksley, H. D. see Grice, R. E.
— see Jackson, B.
Lockow, K.-W. see Hempel, G.
Loegering, W. Q. see Clark, W. A.
Loetsch, F., Haller, E., and Henning, N. 2783
Loewenstein, H., and Pitkin, F. H. 5475
— see McConnel, L. P.
Loewus, F. see Roberts, R. M.
Löffler, A. 2213
Löffler, H. 4653, 6172
Löffler, J. 4933
Løfting, E. C. L. 3502, 5235
Logan, A. F. see Bland, D. E.
Logan, W. E. M. 4954, 4956
Lohmatov, N. A. 2025
Löhr, E. 1847, 2922
— and Müller, D. 5100
Lojan, L. 4367
Løken, A. see Jensen, A.
Loksa, I. 52
Longo, N., Moriondo, F., and Naldini, B. M. 2565
Longworth, J. 1393
Longworth, J. F., and Tinsley, T. W. 4180
Lonn, K. A. 1376
Loo, S. N. see Arthur, H. R.
Loomis, R. M. see Crosby, J. S.

Loon, A. P. van 2471
Loon, J. H. van, and Bol, M. 3926
Loos, W. E. 3071
— and Kent, J. A. 6466
Loots, G. C. see Ryke, P. A. J.
López Balazote, A. 6220
Lopez de Roma, A. see Peraza Oramas, C.
Lorberbaum, V. G. 791
Lord, W. B. see Sackett, S. S.
Lordello, L. G. E. 1071
Lorenz, I. 853, 5754
Lorija, M. L. 3494
Lorio, P. L., Jr. 6020
— and Gatherum, G. E. 3841
— see Hodges, J. D.
Lorougnon, G. 203
Lortie, M. 3226
— see Davidson, J.-G.
— see Lavallée, A.
Löschau, M. 3910
Losche, C. K. 3273
Losensky, B. J. 5788
Lotan, J. E. 460
Lotova, L. I. 6301
Lötschert, W., and Liemann, F. 3593
Lottge, W. see Schmidt, G.
Lotti, A., Gutierrez de Solanos, V., and Deromedis, R. 5506
Lotz, G., and Moeller, J. 5948
— see Moeller, J.
Loub, W. 5029
Loucks, O. L. see Hett, J. M.
Louw, F. 3021, 4635
Love, L. D. see Coffman, M. S.
Loveless, C. M. see Dodge, W. E.
Loveridge, J. P. 5387
Lovrić, N. see Hamm, Đ.
Low, A. J. 2136
Low, C. see Frank, D.
Lowe, D. G. see Satchell, J. E.
Lowe, R. G. 2246, 3873
Lowery, D. P. 1253, 2917
— and Erickson, E. C. O. 1560
— and Kotok, E. S. 2935
— see Kimball, K. E.
— see Wellner, C. A.
Löyttyniemi, K. 6616
Lozovoj, D. I. 1005
Lubardić, S. 6374
Lucas, E. B., and Ajayi, D. S. 1314
Lucas, G. L. 3460
Luchi, G. 3030, 3080, 4646
Lück, H., and Pavlik, A. 4019
Lück, H. B. see Serre, F.
Ludera, J. see Vinš, B.
Lüdge, W. 4209
Lüdtke, M., and Lerch, B. 6382
Lugton, G. S. 4447
Lugviščik, V. V. see Gordeev, A. A.
Luhr, F. 6202
Luke, R. H. 4036
Lukić-Simonović, N. 6626
Łukomski, S. 2497
Lull, H. W., and Reigner, I. C. 4982
— and Reinhart, K. G. 64
— see Sopper, W. E.
Lund, A. E. 1527, 3055, 3103
Lund, H. G., Fahnestock, G. R., and Wear, J. F. 2804
Lundeberg, G. 2214, 5235
— see Björkman, E.
Lundgren, A. L. see Schweitzer, D. L.
Lund-Høie, K., and Bayer, D. E. 5800
Luneva-Nazarova, M. Z. 5176
Lunzmann, K. 5718
Lupe, I. Z. 5599
— et al. 5559
Luppi, A. M. see Fontana, A.
Lupuşanschi, S. 1109-10
Lussier, L.-J. 4443
Lussier, Y. see Maldague, M.
Lust, N. 2807
Lútočka, L'. see Jančo, J.
Lutomski, K., and Ławniczak, M. 1509
Luttrell, E. S. 3299
— see Davis, T. S.
Lutz, J. F. 3026
— Mergen, A., and Panzer, H. 4656
Lützke, R. 3257, 5235
Lux, A., and Luzová, M. 5544
Lux, B.-V. see Deppe, H. J.
Luxová, M. see Lux, A.
Luyen, N., et al. 3291
L'vov, P. L. 5373
Lykke, J. 6804
Lyon, R. L., Brown, S. J., and Richmond, C. E. 5990
— and Shea, P. J. 2666
Lyr, H. 4292
— and Hoffmann, G. 3567
— Polster, H., and Fiedler, H.-J. 99
— et al. 5235
— see Hoffmann, G.
Lysons, H. H., and Mann, C. N. 705

Mabey, G. L., and Rose Innes, R. 3900
McAlister, R. H., and White, J. F. 4535
MacAloney, H. J. 2644, 4238
McAlpine, R. G. see Brown, C. L.
McAndrews, J. H. see Wright, H. E., Jr.
McArthur, A. G. 4037
McArthur, J. A. B. see Young, J. A.
Macbeth, R. G. see Acheson, E. D.
McBride, C. F. 6657
McCambridge, W. F. 2660
McClure, J. P. see Knight, H. A.
McClurkin, I. T., and McClurkin, D. C. 1986
McColl, J. G., and Humphreys, F. R. 3516
McComb, A. L. 6851
McComb, C. W. see Talerico, R. L.
McCombe, B. M. see McKenzie, W. M.
McConkey, T. W., and Swett, C. E. 6011
McConnel, L. P., Loewenstein, H., and Pitkin, F. H. 294
MacConnell, W. P., and Babeu, R. G. 624
— and Stoll, G. P. 625, 5636
McConnen, R. 1659
McConnen, R. J., Amidon, E. L., and Navon, D. I. 2813
— see Navon, D. I.
McCormack, M. L. see Flanagan, T. R.
McCormack, R. J. 3247
— see Rowe, J. S.
McCorquodale, J. A. see Erickson, O. M.
McCraw, W. E. 703
McCreery, R. A. see Steinbeck, K.
McCullough, R. G. 4042
McCutcheon, J. O. see Humble, R. S.
McDermid, R. W. see Lewis, J. H.
MacDonald, A. 424
MacDonald, B. F. see MacLean, H.
Macdonald, D. R., Findlay, J. A., and Tang, C. S. 2628
— see Findlay, J. A.
Macdonald, J. A. B. 2135
MacDonald, M. E. see MacDonald, R. D.
McDonald, P. M., and Sundahl, W. E. 214
MacDonald, R. D., and MacDonald, M. E. 199
Macelo, V. G. see Markov, I. G.
McElwee, R. L. see Johnson, J. W.
McEwen, J. K. 1756
McFee, W. W. 3765
McGee, G. E. 4070
— and Clutter, J. L. 4357
MacGillivray, H. G. 3402
Macgillivray, N. A. see Ziemer, R. R.
McGinnis, J. T. see Cotter, D. J.
McGovern, J. N. 6686
McGowan, W. M. 4569, 6438
McGrath, W. T. 5880
MacGregor, J. J. 2837, 4464
— and Gane, M. 4951
McGregor, M. D. 2627
McGregor, W. H. D. see Bengtson, G. W.
Machaníček, J. 2185
Macht, K.-H. see Kehr, E.
Maciel, H. E. T. see Marinis, G. de
McIntosh, D. C. 2886
McIntosh, D. H., and Hammermaster, E. T. 4452
McIntosh, J. A., and Kerbes, E. L. 5717
McIntosh, R. P. 340
MacKay, G. D. M. 6403
MacKenzie, A. M. 91
McKenzie, W. M. 4613
— and McCombe, B. M. 6480
McKillop, W. L. M. 4459
McKimmy, M. D. 6660
— and Ching, K. K. 6336
McKnight, J. S. see Farmer, R. E.
McKnight, M. E. 4217
MacLachlan, D. S. 3997
McLaren, A. D., and Peterson, G. H. 3271
MacLean, D. B., and Giese, R. L. 1040
McLean, H., and MacDonald, B. F. 1340
McLemore, B. F. 5510
— and Barnett, J. P. 489
— see Barnett, J. P.
McLeod, J., and Martineau, R. 2680
McLeod, J. M. 920
MacMahan, E. A. 3103
McMillan, C., Winstead, J. E., and Williams, G. J., III 182
McMillen, J. M. 3111, 4763
McMillin, C. W. 6680
McNab, J. M., Nevins, D. J., and Albersheim, P. 98
McNab, W. H., and Ach, E. E. 410
MacNaughton, V. B. 5045
McNeil, W. J. see Sheridan, W. L.
MacNulty, B. J. see Bampton, S. S.
— see Butterworth, D.
McQuire, A. J. 3058
Macrae, R. 3450
Madden, J. L. 6044
Madgwick, H. A. I. 2054, 5330
— see Hosner, J. F.
— see Newhouse, M. E.
Madhav, R., Seshadri, T. R., and Subramanian, G. B. V. 6390
Madhosingh, C. 1520
Madlen, J. 1657
Madrigal Sánchez, X. 2103, 3500
Maeda, I. see Nakagawa, H.
Maeglin, R. R. 2262

Maelzer, D. A. see Wellington, W. G.
Maggs, D. H., and Alexander, D. M. 321
Magini, E. 524, 2123, 3668
Magnani, G. 4122, 4152, 4155-6
Magnoler, A. 985, 5993
Magomedmirzaev, M. M. 3631
Mahatadze, L. B. 2086, 3187
Maheut, R. J. 6225
Mahno, C. F. 420
Mahnovskij, I. K. 903
Mahoney, C. L. 54
Maini, J. S. 418
— and Wang, B. S. P. 135
Mainieri, C., and Pereira, J. Aranha 4489
Mair, W. W. 4937
Maiti, M., and Adams, S. F. 6354
— see Mark, R. E.
Majchrowicz, I. see Dominik, T.
Majid bin Haji M. Shahid, A. 5415
Major, R. T. 3578
Majorov, L. I. 5602
Majumdar, N., and Teotia, T. P. S. 1041
Makimura, M. see Okanoue, M.
Mäkinen, V. O. 2789
Makkonen, O. 2386-7
Makosa, K. 1755
Makris, C. [Makrēs, K.] 6827
Maksaeva, L. D. 6153
Maksić, S. see Jekić, M.
Maksimov, V. A., and Gavrilov, V. V. 793
Maksymov, J. K. 2636, 4235
Maku, T. see Ishihara, S.
— see Nam, C.
— see Sasaki, H.
Malac, B. F., and Saranthus, H. M. 4108
Malaisse, F. 2081
Malaviya, M. 1909
— see Rao, A. R.
Malcolm, F. B. 6668
Maldague, M. [E.] 50, 3200, 3280-1, 3283
— and Lussier, Y. 3282
Málek, J. 842
Malhotra, G. R. see Masani, N. J.
Malhotra, H. L. 6513, 6705
Malik, M. N., and Imam, S. M. 6751
— and Khan, A. A. 4831
Malinowski, T. 3181
Maliszewska, Z. 986
Mallen, J. A. see Cadahia, D.
Mallett, S. L. see Jewell, F. F.
Mallik, N. see Chaudhuri, S. K.
Malmberg, C. E. 2391
Malmborg, G. von 1173, 4855, 6197
Malmström, C. 599
Mălureanu, Ş. 5431
Malyševa, O. N. see Bajdalina, N. A.
Malyševa, T. V. 2067
Mamada, S. see Kawamura, Y.
Mamaev, S. A. 2031
Mamedov, F. M. see Komarov, I. A.
Mamedov, K. D. 824
Manabe, D., and Kawakastu, K. 6158
Manakov, V. A., Juškov, Ju. M., and Vodneva, A. N. 2337
Mancevič, E. D. 3711
Mandev, A. see Vezev, L.
Mańka, K. 1834, 5152
Mankevič, L. A., Kucak, A. A., and Averina, G. A. 6484
Man'ko, Ju. I. 2093
Manktelow, E. 3826
Mann, C. N. see Lysons, H. H.
Mann, E. 4110
Mann, M. J. 581
Mans, R. J. 100
Mantel, K. 3178, 3928, 6172
— and Sowade 4897, 6786-7
Manuševa, L. see Stefanović, V.
Manwiller, F. G. 1249
Manz, A., and Schik, J.-P. 6488
Manžos, F. M., and Gindin, M. N. 3031
Marčenko, L. A. 1967
Marčenko, N. D., and Žarov, V. I. 3937
Marcet, E. 3468
Marcos de Lanuza, J., and Velasco Fernandez, L. 6742
Marcu, G. 5401
Mardan, Yu. M. [Ju. M.] 1400
Mardle, R. J. 2359
Margus, M. 3837
— and Tamm, Ü. 5405
Marian, J. E. 1207, 6441
Mariaux, A. 1116
— see Lepitre, C.
Marinis, G. de 5224
— and Maciel, H. E. T. 1839
Marinov, M., et al. 3629
Marinov, T., and Asparuhov, K. 3953
Mario García, J. M. 4561
Marion, G. M., Berglund, J. V., and Leaf, A. L. 5067
Marion, J., and Schoenenberger, A. 640
— see Baldy, C.
Mark, R. E., Adams, S. F., and Maiti, M. 6499
Markov, I. G., and Macelo, V. G. 6687
Markov, S. G. 5740
Marks, G. C., Ditchburne, N., and Foster, R. C. 1983
— and Foster, R. C. 3563
— see Foster, R. C.
— see Wright, J. P.
Márkus, L. 6081, 6113
— and Mátyás, V. 5309
Markus, R. 1179
Markūs, V. see Jokel, J.
Markwardt, L. J. see Doyle, D. V.
Marosvölgyi, B. see Káldy, J.
Marović, R. 6049
Marquis, D. A. 5438
Marris, B. 221
Marsh, J. A. 202
Marshall, J. K. 643
Marszałek, T. 2829
Martel, P., and Sharma, M. 4196, 5946
Martin, J. W., and Carter, M. C. 2211
Martin, R. E. 6324
Martin-Jensen, A. 1083, 3526
Martineau, R. see McLeod, J.
Martinek, V. 5754
Martínez-Crovetto, R. 379, 1624, 1652
Martinović, J. 2745
— Komlenović, N., and Milković, S. 2061
— and Milković, S. 2744
Marty, G. 5637
Marty, R., and Trimble, G. R., Jr. 1163
Marty, R. A. see Carman, R. M.
Martynihin, V. D. 5731
Marukjan, S. M. 4432
Maruyama, A. see Kawada, H.
Maruyama, K., and Endo, I. 5099
Marvin, J. W., Morselli, M., and Laing, F. M. 3920
Marx, D. H. 2502
Mas Porras, J. see Klepac, D.
Masani, N. J., Agarwal, S. K., and Malhotra, G. R. 3016
— Bajaj, A. N., and Gupta, R. K. 6524
— Pruthi, K. S., and Agarwal, S. K. 3017
Mašanov, A. I. 911
Mascher, R. 716
Masiulanis, B., and Rozmej, Z. 6740
Maslennikova, L. F. 2875
Maslov, V. I. see Verhovskaja, I. N.
Mason, L. R., and Hutchings, S. S. 4344
Mason, W. R. M. 1059
Masquelier, J., and Claveau, P. 3162
Massey, C. L. 2656
Masutti, L. 2640
Mata, P. G. see Siriban, F. R.
Mataki, Y., and Ota, M. 1612, 6726
Mateev, A. 3946
Matejak, M. 2950
Matějka, V. 4990, 5538
Mater, J. 4829
Materna, J. 5619
— and Kohout, R. 769
Mathewson, C. 5705
Mathies, J. B., and Schneider, G. 2580
Mathot, G. see Bouillon, A.
Mathur, K. C. 5975
Matos G., F., and Montoya Maquin, J. M. 3618
— see Montoya Maquin, J. M.
Matsui, Z. 5457
— et al. 5456
Matsuoka, S., and Shoji, Y. 6588
Mattheisen, B. R. 6537
Matthies, F. 6172
Mattison, N. L., et al. 3166
Mattson, W. J., et al. 5966
Matulionis, A. A. see Kajrjukštis, L. A.
Matusz, S. 2579, 6128
— see Kreutzinger, M.
Matuzanis, Ja. K., Sacenieks, R. Ja., and Taurin'š, Ja. K. 6105
Matveev, N. M. 2015
Mateeva, A. A. 2063
Mátyás, C. 6661
— see Mette, H.-J.
Mátyás, V. see Markus, L.
Maudoux, E. 438, 5601
Mavrin, A. I. 1416
Mawson, J. C. see Bond, R. S.
Maxwell, H. A. 3334
May, B. M. 1805
May, D. S. 822
May, H. A. see Stegmann, G.
May, J. J. see Steinbeck, K.
Maydell, H.-J. von see Leukens, U.
Mayer, H. 390, 3649, 3664
Mayer-Wegelin, H., and Jung, L. 1698
Mayhead, G. J. see Kinloch, D.
Mayrose, C. K., and Wright, M. K. 5586
Maza, J. de la, Elvira Martín, L. M., and García Fuentes, M. 2401
Mazanec, Z. 4185
Mazek-Fialla, K. 3913
Mazur, O. P. 5290
Mead, W. J. 4453
Meagher, J. W. 6061
Megraw, R. A. 2888, 4510
Mehdizadeh, P. T. 5621
Mehra, B. P., and Gokulpure, R. S. 661, 3925
— see Prasad, U. N.
Mehran, A. R., and Pomerleau, R. 2530

Mehrencev, V. A. 603
Mei, M. A. see Woodfin, R. O., Jr.
Meiden, H. A. 4900
Meier, H. 6674
— see Oesch, F.
Meixner, J. see Lemke, J.
Melchior, G.-H. 2179, 5500
Melehov, I. S. 6781
Melešin, P. I. 2223
Melicharová, A. see Lochman, J.
Mel'nikov, V. I. see Gastev, B. G.
Mel'nikova, M. E., and Petri, V. N. 1602
Melsheimer 3134
Melvin, J. C. E., and Nairn, L. D. 6040
Melzer, E. W. 5401
Mendonza, L. A. 1716
Menninger, E. A. 3391
Menon, V. K. see Rao, A. R.
Menon-Navar, R. 5910
Mensah, K. O. A., and Jeník, J. 3574
Menshun, M. see Bland, D. E.
Men'šikova, L. V., et al. 4827
Mentberger, J. 778
Menzel, K. 1809
Merendi, A. 233
Mergen, A. see Lutz, J. F.
— see Peters, C. C.
Mergen, F., and Thielges, B. A. 5185
— Worral, J., and Furnival, G. M. 1891
— see Worrall, J.
Meriluoto, J. 1408, 6431
Merkel, E. P. 2196
— and Fatzinger, C. W. 2589
— see Neunzig, H. H.
Merkel, O. 322
Merker, E., and Eichhorn, O. 928
Merriam, L. C. 3200
Merrifield, R. G., and Foil, R. R. 2290
— Foil, R. R., and Hansbrough, T. 2625
— see Foil, R. R.
Merrill, W. 4128
Merritt, C. 5295
— and Adams, M. H. 496
— and Bramble, W. C. 607
— and Giese, R. L. 2078
— see Byrnes, W. R.
— see Dhillon, P. S.
Merxmüller, H. 1912, 5203
Merz, R. W., and Copper, G. A. 6566
Merz, W. see Huber, B.
Mesavage, C. 2691
Meskimen, G. 3780
Messenger, A. S. 28
Messer, H. 5505
Meštrović, Š. 2708
Meteer, J. W. 1566
— Stott, C. B., and Jewell, J. F. 1096, 6097-8
Métro, A. 4956, 5595
Metsä, A. see Liiri, O.
Mette, H.-J., and Mátyás, C. 4783
Meyer, F. H. 47, 3571
Meyer, H. 1140, 5419
Meyer, H. E. see Buffam, P. E.
Meyer, H. J., and Norris, D. M. 1035-6
Meyer, J. A. see Young, R. A.
Meyer, K. A. 3183
Meyer, M. P., and French, D. W. 2506
— see French, D. W.
Meyer, R. see Hilf, H. H.
Meyer, R. W. 4514
— and Leney, L. 6662
Meylan, B. A. 6321
Meyr, R. 709, 2400, 3967
Mezera, A. 2747
Mia, A. J. 1251, 4522
Mičev, B., and Najdenov, A. 6768
Michael, G. 4006
Michalski, L. 5115
Michel, B. E. see Dumbroff, E. B.
Micheli S., H. see Han R., M.
Michell, A. S. see Wackerman, A. E.
Michniewicz, M. 1834
Michon, P. 3919
Mickovski, M. 42
Miegroet, M. van 1848, 2121, 2301, 3176
Mielke, J. L., and Peterson, R. S. 4140
Mierzejewski, W. 5401
Miething, E. see Ritter, G.
Migita, N. see Iiyama, K.
Mihaila, I., et al. 5750
Mihăilescu, M. see Bereziuc, R.
Mihailović, M., and Potrebić, M. 6487
Mihajličenko, A. L. 1559
Mihajlov, A. 2859
Mihajlov, I. 2713
Mihajlović, M. see Senić, R.
Mihajlovskij, Ju. V. 1621
Mihálik, A. see Bublinec, E.
Mihaljuk, G. F., and Anučin, P. I. 6725
Miheev, I. I., et al. 6664
Mijušković, M. 4279
Mikit, E. A., and Upmanis, K. K. 6637
Miklavžič, J. 5422
Mikloš, I. 2635, 2682, 4183
Mikola, P. 5235, 1992
Mikyška, R. 238, 332, 2068
Milano, V. A., and Molinari, E. P. 5229
Miles, R. 1685
Milescu, I., et al. 1943
Miljutin, L. I. 151
Milković, S. see Martinović, J.
Miller, A. D. S. see Wood, R. F.
Miller, D. G. 6250
— and Benicak, J. 4564
— and Tardif, Y. 6349
— see Humble, R. S.
Miller, D. H. 5033
Miller, D. J., and Graham, R. D. 6496
Miller, H. G., and Miller, J. D. 1751
Miller, J. D. see Miller, H. G.
Miller, L. N. 774
Miller, P. C. 133, 4986
— and Gates, D. M. 109
Miller, R. L. see Richesson, M. A.
Miller, W. D. 5216
Miller, W. E. 953
— Wilson, L. F., and Buchman, R. B. 4210
Miller, W. F., and Starr, J. W. 3881
Millers, I. 4247
— see Wilson, L. F.
Millier, C. see Polge, H.
Milligan, R. H. 6617
Milne-Redhead, E., and Polhill, R. M. 3460
Milosavljevic, R. 4031
Milošević, R. 5026
Milovanović, M. 3871
Minami, J. see Sako, S.
Minami, K., Kondo, M., and Yoshimoto, T. 1366
— see Peng, J.-Y.
— see Yoshimoto, T.
Minckler, L. S. 2315
Minderman, G. 3602
— and Daniëls, L. 47
— and Leeflang, K. W. F. 3550
Minerbi, B. see Jedlowski, E.
Minin, A. N. 6507, 6730
Miniutti, V. P. 1412
Minkevič, I. I. 5861
Minko, G. see Wright, J. P.
Minore, D. 1230
Minowa, M. see Nagumo, H.
Mirković, D. see Peno, D.
Mironenko, O. N. 2092
Mironov, N. A. see Vinokurov, M. A.
Mironov, V. 6226
Mironov, V. V., Erusalimskij, V. I., and Anciferov, G. I. 3807
Mirošničenko, Ju. M. 6112
Mirošničenko, S. N. see Rakin, A. G.
Mirov, N. T. 200
Mirzoev, B. B. 413
Misilo, P. 4760
Miskovski, P. 4031
Miskus, R. P. see Buffam, P. E.
— see Lang, J. M.
— see Pieper, G. R.
Misra, G., and Mitra, C. R. 4842, 6749
Missbach, K. 4044, 4048
Mitchell, B. 3334
Mitchell, R. G. 931
— see Franklin, J. F.
Mitra, C. R. see Misra, G.
— see Nigam, S. K.
Mitra, S. N. see Tewari, M. C.
Mitrofanov, V. I. 4287
Mitscherlich, G., Künstle, E., and Lang, W. 1737
Miura, H. 1825
Miyake, N., and Okibe, A. 5496
Miyata, K. see Ikeda, S.
Miyauchi, H. see Tadaki, Y.
Mladěnov, I. see Nikolov, S.
Mlinšek, D. 2111, 2120, 2122, 5421, 5428, 5430
Moak, J. E. 5045
Močalkin, L. S. see Haritonov, G. A.
Moehring, D. M., and Ralston, C. W. 1964
Moeller, J., and Lotz, G. 5968
— see Lotz, G.
Moen, A. N. 4984
Möhler, K., and Ehlbeck, J. 6373
Möhring, K. 5575
Moir, R. H. see Leney, L.
Moiseenko, F. P., Koževnikov, A. M. 2679
Mojko, M. F. 570
Mok, S. T. 4902, 6102
Mokashi, V. K., and Acharya, D. P. 2774
Molčanov, A. A. 3584
Moldenke, H. N. 1935, 3497-3499
Molenda, T. 3181
Molinari, E. P. see Milano, V. A.
Möller, F., and Krannich, K. 3294
Molotkova, N. D. 4088
Moložnikov, V. N. 5308
Momirović, B. 5866
Momoh, Z. O., and Oluyide, A. O. 3079
Monahov, A. K. 368
Mondino, G. P. 2083
Monk, C. D. 297, 2007
Monroy, M. K. see Francia, F. C.
Monsalud, M. R. see Semana, J. A.
Montague, D. E. 6432
Montaldi, E. R. see Concha Marcavillaca, M.
Monteil, G. see Prouvier, M.
Monteith, L. G. 1048

Montoya Maquin, J. M., and Matos G., F. 356
— see Matos G., F.
Moodie, C. D. 5020
Moody, R. C. 1614
Mooney, H. A. see Schulze, E. D.
Moore, A. D. see Himel, C. M.
Moore, A. W., Russell, J. S., and Coaldrake, J. E. 327
— see Russell, J. S.
Moore, D. 1660, 6778
Moore, J. C. see Goggans, J. F.
Moore, N. W. 3335
Moore, W. H., and Johnson, F. M. 896
Moosmayer, H.-U. 613
Morain, S. A., and Simonett, D. S. 1146
Moral, R. del 305
Morandini, R. 2219
Mörath, E. 1594, 6531
Morawski, S. 2265
Moreau, R., and Poly, J. 406
Moreev, V. P. 797
Morel, J. 3192
Moreland, D. E. 100
Morey, P. R. 4504
Morf, W. see Pharis, R. P.
Morgan, F. D. 992, 2664, 3324
Morgan, J. F. see Burley, J.
Morgan, J. W. W., and Orsler R. J. 2989, 4592, 6310
— and Thomson, J. 6407
Morgan-Jones, G. 2505
Morge, G. 6013
Mori, S. see Anderson, R.
Morii, T. see Ito, E.
Morimoto, K. see Inou(y)e, M.
Morin, L. A. see Etheridge, D. E.
Morinaga, J. see Yasui, H.
Moriondo, F. see Longo, N.
Morisawa, M., and Abe, T. 1790
Morita, E. 2721
Moriya, K. see Nishihara, M.
Morón, I. 444, 1713
Moroto, T. 2400
Morozova, S. F. see Gorlovskij, S. I.
Morretes, B. Lange de 1862
Morris, A. C. 1456
Morris, E. L. 1449
Morris, E. N. 3015
Morris, E. V. 4274
Morris, J. E. 5169
Morris, J. [Y.] 2074
Morris, L. J., and Hall, S. W. 4844
Morris, R. C. 952
Morris, R. F. 946, 978
Morrison, F. O. see Shaikh, M. U.
Morrison, T. M., and English, D. A. 285
— and Heine, R. W. 1843
Morrow, R. R. 627-8, 631
Morselli, M. see Marvin, J. W.
Morton, D. H. see Smith, M. K.
Moser, J. W., Jr. 6164
Moser, L. 4856
Moser, W. 1189
Moskaev, A. P. 5375
Moslemi, A. A. 6309
— and Bair, J. G. 6724
Mossadegh, A. 3654
Mossberg, E. 389
Mostyn, H. P., and Hardie, A. D. K. 4454, 4479
Mothershead, J. S. see Graham, R. D.
Mottet, A. 3135
Moulds, F. R. 1793, 4034
Moulopoulos, Ch. 212, 2110
Mountain, H. 2394
Mouser, W. E. see Lightle, P. C.
Možina, I. 6306
Mráz, K. 1753
Mroczkiewicz, L. 5401
Mudd, J. B. 100
Mueller, L. A. see Troxell, H. E.
Mueller-Darss, H. 5674
Muhambetžanov, K. K. see Krjukova, L. M.
Mühlethaler, K. 100
Mühlmann, R. 709
Muir, J. D. see Hawkins, P. J.
Mukai, H. N. see Chow, S.-Z.
Mukaide, H. see Sakai, K.-I.
Mukherjea, V. N., et al. 4799
Mukherjee, R., and Bhambri, S. C. 3446
Mulcock, A. P. 3170
Muldrew, J. A. 1058
— see Elliott, K. R.
Muljarčuk, S. O. 5372
Mulkidžanjan, Ja. I. 3465
Müller, D. see Löhr, E.
Müller, H. 3369
Müller, H.-J. 4170
Müller, K. 3244
Müller, P. H. 6344
Müller, S., et al. 3287
Müller, W. 3344
Müller-Eckhardt, H. 4475, 4809
Müller-Stoll, W. R., and Zenker, R. 1250
Mullin, R. E. 559
Multamäki, M. 6203
Muncey, R. W. R. 6247, 6535
Munkačević, V. 6139
Munn, R. E. 24
Münz, U. V. see Barz, E.
Murai, M. see Kobayashi, F.
Murakami, K. 2984
Muraki, E. see Koshijima, T.
Muraro, S. J. 2454
Muratgel'dyev, N. 3696
Murav'ev, A. V. 729
Murko, D. 1626
Murphey, W. K. 3028
Murphy, J. L. see Scowcroft, P. G.
Murray, C. H. 811, 6807
Murray, J. S. 2554
Murray, M. R. see Wangaard, F. F.
Murti, V. V. S., Raman, P. V., and Seshadri, T. R. 92
— see Datta, S. C.
Murty, V. K., Rao, T. V. P., and Venkateswarlu, V. 1353
Musil, I. 3686
Musílek, V. see Šašek, V.
Mussehl, T. W., and Finley, R. B., Jr. 919
Mustafa bin Muda 6791
Muszyński, Z. 3958, 3965, 4776
Mutarelli, E. J., Alonso, O. C., and Orfila, E. N. 6093
Mutch, W. E. S. 2839, 6173
Mutibarić, J. 2929, 4571, 4610, 6338
Myburgh, H. A. 3137
Myczkowski, S. 3456, 5152
Myers, C. A. 1131, 6148
Myers, W. L. 6004
Myhre, R. J. see Wert, S. L.

Nadutkin, V. S. see Volkov, A. D.
Nagasampagi, B. A., Yankov, L., and Sukh Dev 6394
Nagata, H. 1953, 3606
Nagata, Y. 1952
Nagatomo, Y. see Tadaki, Y.
Nagel, W. P. see Cowan, B. D.
Nagel de Boois, H. M., and Jansen, E. 47
Nagoda, L. 4338
Nagumo, H., and Minowa, M. 4422
Nagy, G. 2179, 2978
Nagy, I. 1958
Nahabcev, I. A., and Beljaev, Ju. A. 1703
Nair, N. B. see Ansell, A. D.
Nairn, L. D. see Melvin, J. C. E.
Naito, T., et al. 2018
Najdenov, A. see Mičev, B.
Najdenova, C. see Stefanov, B.
Nakagawa, H., Maeda, I., and Kawarada, Y. 6645
Nakai, I. see Watanabe, M.
Nakajima, Y., and Tsujita, A. 5065
Nakamura, G. 4620
— see Kawaguchi, M.
Nakamura, S. see Sakurai, T.
Nakamura, Y. see Hatano, K.
Nakano, J., et al. 1326
— see Iiyama, K.
Nakano, T., and Kaburagi, J. 6261
Nakato, K. see Saiki, H.
Nakatsuka, T. see Hirose, Y.
— see Yanagawa, T.
Naldini, B. M. see Longo, N.
Nam, C., and Maku, T. 1399
Namkoong, G., Barefoot, A. C., and Hitchings R. G. 5160
Nanasawa, N., and Koga, T. 3006
Nanda, K. K., et al. 5540
Nanson, A. 3710
— see Delecour, F.
Narayanamurti, D., Dumar, R. N., and Rao, M. R. 3024, 4644
— and Rukmini, M. S. I. 6368, 6709
Nartov, P. S. 471
— and Litvinkov, S. S. 470
— and Veršinin, V. I. 469
Nash-Wortham, J., and Savory, J. G. 6491
Nastran, Z. 392
Nath, B. see Sagreiya, K. P.
Nath, K. 5429
Nath, P. see Seth, S. K.
Naumčuk, V. F. 4660
Nautiyal, J. C. 1679
— and Pearse, P. H. 1180
— and Smith, J. H. G. 4906
Navalihina, N. K. see Ščepot'ev, F. L.
Navarro, J. R. see Nicolas, P. M.
Navon, D. I. 4428
— and McConnen, R. J. 2810
— see McConnen, R. J.
Nayar, R. M. 4161
Näykki, O. see Hintikka, V.
Nazarenko, L. I. 2469
Nazarov, V. A. 1195
Nazarova, L. F. see Krjukova, L. M.
Nazarova, M. M. see Vasil'eva, L. N.
Neal, J. L., Jr., et al. 1996
Neal, R. L., Jr. 3582
Nearn, W. T., and Bassett, K. 6723
Nebe, W. 270
— and Rzeźnik, Z. 3529
Nečaeva, E. G. 5375
Nečesany, V. 4507-8
— and Oberländerová, A. 2906
— see Bobák, M.

Necşulescu, H. see Popescu, I.
Nedjalkov, S. 4415
— Krăstanov, K., and Beljakov, P. 4401
— see Petkov, P. D.
Neel, L. 4033
Neel, W. W., and Belcher, E. W., Jr. 497
— et al. 990
— see Affeltranger, C.
— see Belcher, E. W., Jr.
Neely, D., and Himelick, E. B. 4158
Nef, L. 2624
Nefedov, A. A. see Grin', V. I.
Negi, G. S. 1123
— see Sekhar, A. C.
Negru, Ş. 5999
— and Pîrvescu, D. 6015
Negruţiu, A. see Săvulescu, A.
Neilson, M. M., and Elgee, D. E. 6050
Neilson, R. W. see Flann, I. B.
Nekrasov, M. D. 2833
— and Ponomarev, A. N. 1886
Nekrasova, G. N. 1563, 3125
Nelson, L. E., and Switzer, G. L. 2196
— see Switzer, G. L.
Nelson, P. F , and Porter, Q. N. 1345
Nelson, R. E. 5399
— see Honda, N.
— see Wong, W. H. C., Jr.
Nelson, T. C. 2687, 5045
Nepenin, Ju. N., and Pogoževa, T. A. 4802
— see Služiteleva, V. N.
Nersten, S. 4327
Nešataev, Ju. N. 5345
Nespiak, A. see Jahn, H.
Nespjarovič, M. D., and Kraŭčanka, L. U. 2297
Nesterenko, V. G. 2372, 4549
Nesterov, V. G. 6781, 6850
Nesterovič, N. D., Čekalinskaja, N. I., and Sirotkin, Ju. D. 5144
Nethercote, C. H. 4633
Neumann, E. E. 5619
Neumann, P. see Schütt, P.
Neunzig, H. H., and Merkel, E. P. 962
Neusser, H. 6717
— and Krames, U. 4785
Neustein, S. A. 2258, 6174
Neuwirth, G. 3374, 5235
Nevins, D. J. see McNab, J. M.
Nevzorov, V. M. see Hirov, A. A.
Newbould, P. J. 3598
Newhouse, M. E., and Madgwick, H. A. I. 5318
Newman, J. G. 6183
Newnham, R. M. 2367, 2706, 4403, 5692
Newton, M. 2420, 2484, 5604
— see Zavitkovski, J.
Nezdojminogo, È. L. 5199
Nicenko, A. A. 5001
Nicholas, D. D. 2943
— and Thomas, R. J. 6625
— see Thomas, R. J.
— see Wooton, T. E.
Nicholls, J. W. P. 5157
Nicholson, J. 3402
Nicholson, J. J. M. see Farrar, J. L.
Nickerson, D. E., and Bajzak, D. 2779
Nicolás, A., and Gandullo, J. M. 3505
Nicolas, P. M., Navarro, J. R., and Ynalvez, L. A. 1577
Nicota, B., and Stamenkov, M. 1890
Niefnecker, W. 4227
Nielsen, U. see Beisel, G.
Niesslein, E. 3200, 6813
Nigam, B. S. see Khalsa, H. G.
Nigam, P. C. 5980
— see Randall, A. P.
Nigam, S. K., and Mitra, C. R. 4836
Nijhoff, W. W. 3331
Nikitin, L. I. 665
Nikitin, P. D. see Al'benskii, A. V.
Nikitin, S. A. 5374
Nikitin, V. V. 6073
Nikles, D. G. 1893
— see Slee, M. U.
Niklfeld, H. 4023
Nikolaev, V. S. 394
Nikolaeva, M. G., and Poljakova, E. N. 3742
Nikolaeva, Z. V. 2029
Nikolaevskij, V. S. 4021
Nikolić, Đ, see Tucović, A.
Nikolov, S., and Enčev, E. 2859
— and Kolev, B. 4752
— and Mladenov, I. 4532
— and Rajčev, A. 4537
— et al. 2859, 4603, 6262
Nikolov, V. see Vezev, L.
Nikulin, N. A. 734
Nilsson, B. 154
— and Wiman, S. 5492
Nilsson, E. see Kiellander, C. L.
Nilsson, T. see Bergman, Ö.
Nimmo, M. see Wood, R. F.
Nimz, H. 1325
Ninov, N. 1768
Nishihara, M., Moriya, K., and Sugano, M. 1432
Nishimoto, K., see Hayashi, S.
— see Takahashi, M.
Nishizawa, M. 2697
Nisula, P. 2703, 2735, 4334, 6120, 6330, 6508
Niţu, C. see Enescu, V.
Niwiński, Z. see Żelawski, W.
Noble, W. A. 4923
Nobles, M. K. 830
Nobles, R. W., and Briscoe, C. B. 467
— see Briscoe, C. B.
Nobuchi, A. 5049
Noel, A. R. A. 5634
Noer, H. 1187
Nogueira, C. D. Serrão see Silva, F. Azevedo e
Nõmmik, H. 1748
— and Popović, B. 3347
— see Björkman, E.
Norberg, P. H. 6674
Nordby, A., and Wilhelmsen, G. 5700
Nordquist, M. 4457
Norén, B. 4682
Norimoto, M., and Yamada, T. 1311, 1411, 2966
Norin, T. see Kimland, B.
Norris, D. M., and Baker, J. E. 6030
— see Baker, J. E.
— see Gilbert, B. L.
— see Meyer, H. J.
Norris, L. A., and Freed, V. H. 806
— and Greiner, D. 2486
— see Tarrant, R. F.
Noskowiak, A. F. 6656
Nosovskij, T. A. 3013
Noste, N. V. 5785
Novák, V. 5754
— and Sláma, M. 1526
Nováková, E. 4017
— and Hanzl, R. 5056
Novikava, A. A. 1819
Novotný, M. 6230
— and Pařez, J. 2814
Novotný, V. 557
Nowicki, E. see Perkitny, T.
Nowicki, W. 2370
Nozaki, K. see Seto, K.
Nožička, J. 425, 2138, 3179
Nüesch, H. 3324
Nuorteva, P. 2552
— and Jussila, R. 5985
Nyland, R. D. 2349
Nylinder, P. 1105-6, 1295, 6124
Nymburský, B. 6188
Nyyssönen, A. 2802, 4394, 4908
— Poso, S., and Keil, C. 6170

Obayashi, K. 2269
Oberländerová, A. see Nečesaný, V.
Obermejster, A. M., and Gagarskij, È. A. 1548
O'Carroll, N. 2281
— see Brit, G. de.
Occolowitz, J. L. see Johns, S. R.
Odabaşi, T. 3726
Odincov, P. N., and Katkevič, Ju. Ju. 6292
Oehlecker, H. 716
Oekonomopoulos [Oikonomopoulos], A. 3219
Oertel, J. 1590-1, 6706
Oesch, F., and Meier, B. 5083
Oeschger, H. J. 4002
Offord, H. R. 2540
O'Flanagan, L. 2705
Ogata, K. 3474
Ogata, N. see Tadaki, Y.
Ogawa, A. see Chiba, S.
Ogbe, G. A. E. 5411
Ogievskij, V. D. 13
Ogievskij, V. V. 419
Ogiyama, K., and Kondo, T. 6378
Oglobin, A. 995
Ohba, K., et al. 1878
Ohman, J. H. 5831
Ohmann, L. F. 5312
Öhrn, O. 3674
Ohta, S., et al. 6415
Ohtani, R. see Kawaguchi, M.
Ohtomo, E. 2696
Oikonomopoulos, A. see Oekonomopoulos, A.
Oinonen, E. 2019-21
Oka, Y., and Yamada, T. 2940
Okada, S. 2228
Okanishi, T. see Yagishita, M.
Okanoue, M., and Makimura, M. 1736
Okeke, R. E. 1232
Okibe, A. see Miyake, N.
Oknińska, B. see Ważyńska, J.
Okohira, Y. 6370
Oksanen, H. see Kangas, E.
Oksbjerg, E. 5069
Okstad, T. see Braathe, P.
Okuma, M. 4677, 6527
— and Shinozuka, M. 1429
— and Terui, K. 3045
Ólafsson, G. see Thorsteinsson, I.
Olagbemi, E. O. see Ekong, D. E. U.
Olatoye, S. T. 3735
Oldeman, R. A. A. 3463
Oldenkamp, L. 5574
— and Elk, B. C. M. van 554
— see Gerritsen, H. J.

Olien, C.R. 100
Olisaev, V.A. 398
Oliveira, V.F. 2210
Oliver, W.W. 3660
Olofinboba, M. see Levy, J.F.
Olovenikov, G.B. 2334
— see Krylov, N.I.
Oloya, M. 1531
Olson, E.F. see Vogenberger, R.A.
Olson, J.S. 319
Olsson, B. 389
Olszewski, J. 3007
— and Woźniak, A. 3253
— see Głogowska, J.
Oltus, E. 2859
Oluyide, A.O. see Momoh, Z.O.
O'Neil, L.-C. 4282
— see Sharma, M.L.
Onishi, H. see Goto, T.
Oniśko, W., and Szymczak, M. 3148
Ono, S., and Kawaguchi, T. 67
Openshaw, K. 1202, 6173
Opheim, T. see Jørgensen, F.
Oppenheimer, H.R. 5263
Opriţa, V. see Bereziuc, R.
O'Regan, W.G. see Arvanitis, L.G.
Orfila, E.N. see Mutarelli, E.J.
Orfila, R.N. 5977
Orians, G.H. see Gessel, S.P.
Orjuela Navarrete, J. 4081
Orlandi, E. see Gambetta, A.M.
Orłoś, E. 2496
Orlov, A.T. see Pelepelin, V.M.
Orlov, I.I. 655
Orlov, S.F. see Artamonov, Ju.G.
Orman, H.R. 4684
Orr, H.K. 5038
Orr, P.W. see Wear, J.F.
Orr, W.J., and Dell, J.D. 4050
Orr-Ewing, A.L. 457
Orrom, M.H. 4910, 4919
Orsler, R.J. see Morgan, J.W.W.
Ortega Ergueta, M. 1159
Orth, H., et al. 6573
Osborne, L.D. 3087, 4738
Oseni, A.M. 4939, 5679
Osgood, E.A., Jr. see Clark, E.W.
Oshima, M., et al. 3152
Oshima, N., and Beagley, J.K. 5849
— and Klinger, B. 4980
Osin, V.A. see Galaktionov, I.I.
Osipenko, N.I. 4176
Osipov, P.E. 735
Osipov, V.V. 1779
Oslonovič, V.N. see Krotov, L.N.
Osnach [Osnač], N.A. 1294
Ossowski, L.L.J. see Sherry, S.P.
Ostalski, R. 2375
— and Butenko, M. 2376
Ostmark, H.E. 2667
Ostrovskij, M.P., and Švecov, Ja.N. 1315
Ostrowski, S. 1962
Ostrowski, W. 5667
O'Sullivan, A.M. see Donnelly, B.J.
Osuský, A. see Holota, J.
Oswald, E.T. 5393
— and Ferchau, H.A. 3561
Ota, M., and Tsubota, Y. 1433
— see Mataki, Y.
Otlivanchik [Otlivančik], A.N., et al. 1501
Otto, D. 5754
— and Hackbarth, W. 4177
Ouellet, C.E. 3788
Ouellet, C.E.—continued
— and Sherk, L.C. 3518
Ouellet, É. see Goulet, M.
Ouellette, G.B. 4130, 4134, 4172, 5829
Outer, R.W. den 2924
Outram, I. 5961
Overrein, L.N 596, 3854
Ovington, J.D. see Attiwill, P.M.
Owen, T.H. see Huggard, E.R.
Owens, J.N. 5188
Owston, P.W. 1854, 5332
Öy, H. 1188
Özdemir, O.L. 3855
Ozolina, I.O., and Švalbe, K.P. 6568

Paarlahti, K. 2283-4
— see Huikari, O.
Paasonen, K. 1342
Paavilainen, E. 293, 2000-1, 5296
Pachler, K.G.R., and Roux, D.G. 1355
Pachlewski, R. 1834, 1991
Packard, R.L. see Harvey, M.J.
Packman, D.F. 4790, 6677
— and Laidlaw, R.A. 1572
— see Young, W.D.
Pacyniak, C. 3181
Paetzholdt, M. 5895
Page, D.H., and Grâce, J.H. de 2887
Page, G. 5281
Page, M.W. 6536
— and Hawkins, B.T. 6673
Págony, H. 2321, 5754
— see Igmándy, Z.
Pahlitzsch, G., and Dziobek, K. 1593
— and Rowinski, B. 3002, 6426
Paiero, P., and Giannini, R. 3813
Paille, G. see Vezina, P.E.
Paine, D.W.M. 4336
Päivänen, J. 60, 5582
Pal, A.K. see Ray, B.N.
Palašev, I. 3577
Palieri, M., and Rambelli, A. 6500
Palissa, A. 47
Palit, S.B. 6211
Palley, M.N. see Lindquist, J.
Palmer, E.R., and Gibbs, J.A. 6684
— and Tabb, C.B. 6683
— see Escolano, J.O.
Palmer, R.W.V. see Scott, C.W.
Palomares N., N., and Puente E., J.M. de la 6798
Paludan, F. 844
Paluvits, A. see Valk, U.
Palzer, C.R. see Podger, F.D.
Pamay, B. 3655
Panasevič, T.G. 6502
Pande, D.C. 5429, 5444
Pande, G.C. 1584
Pande, J.N., and Jain, J.K. 3056
— Sharma, R.P., and Jain, J.K. 6543
Pandeya, S.C., et al. 2791
Pantjuhov, G.A. 4229
Pántos, D.T. 3541
Panzer, H. see Lutz, J.F.
Papadakis, J. 1716
Papamichos, N.T. see Dotzenko, A.D.
Papendorf, M.C. 44
— and Toit, J.W. du 3301
Papp, G., and Vilaghy, G. 1044
Papp, L. 1740, 5404, 5529
Parameswaran, N. see Gottwald, H.
Parascan, D., et al. 3368
Parberry, D.G. 5028
Pařez, J. 2308
— see Novotný, M.
Parfenenko, G.A. 4810
Paris, J. 1867
Parker, H.W., Gibson, H.G., and Phillips, R.A. 2400
Parkinson, D. see Gray, T.R.G.
Parmeter, J.R., Jr. see Scharpf, R.F.
Parra Ortum, J.-L. 5554
Parry, H.W. see Dobie, J.
Parsons, R.F., and Specht, R.L. 269
Partridge, A.D. 4124
Paruševa, A., et al. 2859
Pasák, V. see Ferda, J.
Paşcovici, V., et al. 908
Paşcovschi, S. 336
— and Doniţă, N. 366
Pase, C.P. 818
— et al. 2489
— see Davis, E.A.
Paškov, V.K. see Grube, A.Ė.
Passarge, H. 1115, 5344
— see Eberhardt, E.
Pastrana, J.A. 1716, 5976
Pásztor, Y.P. de Castro see Filho, O.A. Gurgel
Patackas, A.I. 2786
Patel, R.N. 1231, 2881
Paterson, A.L. 6496
Paterson, D.N. 2140, 2714, 3406, 6658
Paton, D.M., and Willing, R.R. 5259
Patric, J.H. 1744
— and Swanston, D.N. 5043
Patrikeev, E.I. see Smirnov, V.N.
Patscheke, G., Poller, S., and Teske, W. 4801
Patton, R.F. 2536
Patzer, W.E. see Wilde, S.A.
Paul', Ė.Ė. see Vihrov, V.E.
Pauly, G. 3377
Pausch, E. 4383
Pavelescu, I.M. 6655
Pavić, J. 6627
Pavlenko, I.A. 585
Pavlić, J. 2754
Pavlik, A. see Lück, H.
Pavlov, V.M. see Kozlovskij, V.B.
Pawsey, R.G. 4146
Paxton, I.H. 3047
Payens, J.P.D.W. 5222
Payne, S.R., and Backhouse, G.W. 386
Peachey, J.E., and Ahsan, S.W. 6059
— and Larbey, D.W. 1067
Peacock, J.W. 5953
— Kennedy, B.H., and Fisk, F.W. 1034
Peake, J.F. 3633
Pearl, I.A. 6375, 6748
— and Darling, S.F. 1634
— see Estes, T.K.
— see Kinsley, H., Jr.
Pears, N.V. 2073
Pearse, P.H. 1181
— see Nautiyal, J.C.
Pearson, A.J. see Elder, R.A.
Péch, G. 2448
Pechanec, J.F. 3200
Pechmann, H. von 2109, 6582
— et al. 1510
— see Aufsess, H. von
Peckham, J.R. see Buijtenen, J.P. van
— see Einspahr, D.W.
Pederick, L.A. 5187
Pedley, L. 382
Peek, J.D. see Burgess, H.J.
Peel, A.J. 5096
— see Ford, J.

Peet, G.B. 2451, 2453, 4053
Peev, H. 3689
Pejč, N.N., and Boronenko, Z.V. 1537
Pejoski, B. 2859, 6250
— and Todorovski, S. 1259-60
Pěk, L.V. see Tarbinskij, Ju.S.
Pelepelin, V.M., and Orlov, A.T. 1406
Pelinck, E. 6802
Pelíšek, J. 29, 1745, 5007
Pelletier, R. see Pomerleau, R.
Pel'menev, V.K. 3924
Pelz, E. 3995
Peña, J. see Vieitez, E.
Penev, N., and Georgiev, A. 5235
— Georgiev, A., and Vlasev, V. 5370
Penfound, W.T. 3637
Peng, J.-Y., Minami, K., and Yoshimoto, T. 1368
Penick, E.B., Jr. 6533
Penka, M. 3363, 3365, 5098
Peno, D., and Mirković, D. 5580
Peno, M. 4293
Pentland, G.D. 5833-4
Pentoney, R.E. see Bach, L.
Peotter, G.W. see Pinney, T.S., Jr.
Pepper, L., and Derrington, C.F. 6412
Peraza Oramas, C., and Lopez de Roma, A. 4486
Percovskij, A.L. see Bardyšev, I.I.
Pereira, H.C. 3814
Pereira, J. Aranha see Mainieri, C.
Perel', T.S. 3304
— Karpačevskij, L.O., and Jegorova [Egorova], S.V. 56
Pérez Rosales, S. 4947
Perfumo, L. 5657
Perkins, C.J. 4033
Perkins, H.F. see Pokorny, F.A.
Perkitny, T., Helińska-Raczkowska, L. 4762
— and Nowicki, E. 1285
Perry, D.H., and Hopkins, E.R. 5157
Perry, S.F. 96
Perry, T.O., and Simons, R.W. 3382
Persinos, G.J., and Quimby, M.W. 6752
Perttunen, V. see Kangas, E.
Pessel', M.A. 1192
Pestal, E. 709, 3980, 5737, 6218
Peter, R.K. 4617
Peterken, G.F., and Lloyd, P.S. 1942
Petermann, H., Lackner, E., and Schenck, W. 6497
Peters, C.C., Zenk, R.R., and Mergen, A. 6482
Peters, J. 3957
Peters, R.A., and Shorthouse, M. 1824
Peters, R.C. see Wilson, R.W., Jr.
Petersen, L., Rasmussen, K., and Jensen, A.T. 5584
Peterson, G.H. see McLaren, A.D.
Peterson, G.W. 2558
Peterson, H.W. 2405
Peterson, L.O.T., and Worden, H.A. 5949
Peterson, O. see Nylinder, P.
Peterson, R.S. 2542, 3454, 5874
— and Salinas Quinard, R. 2575
— see Mielke, J.L.
— see Hinds, T.E.
Peterson, T.A. 3415
Petkov, P.B. 3569
Petkov, P.D., and Nedjalkov, S. 5420
Petrenko, E.S. 1861
Petrenko, I.A. 4723
— see Fradkova, R.E.
Petrescu, L., et al. 2300
Petri, L. 4618
Petri, V.N. see Birjukov, M.V.
— see Bursin, A.Ja.
— see Mel'nikova, M.E.
Petříček, V. 698
Petroff, G., Doat, J., and Tissot, M. 3140, 4800
Petrov, M. 185
Petrov, N.F. see Pravdin, A.M.
Petrov, S.A., and Rjazanceva, P.A. 2979
Petrov, V.V. 307
— and Cyganov, D.N. 3617
Petrović, N. 4031
Petrovič, S. 1619, 4825, 6715
Petrovskij, P.Ja. see Jurkevič, I.D.
Petruša, G.N. 723
Petyt, L.J. 3334
Pfister, R.D. 482
Pharis, R.P. 5264
— and Ferrell, W.K. 175
— Hellmers, H., and Schuurmans, E. 1850
— and Morf, W. 5498
Phelps, W.R., and Kuntz, J.E. 5860
— Kuntz, J.E., and Ross, A. 857
Phengkhlai, C. 5211
Philip, M.S. 5442
— see Lindley, D.K.
Philippis, A. de 385
Phillips, C.B. 780
Phillips, E.W.J. 2858, 2860, 6328
Phillips, F.H., Bain, R.B., and Watson, A.J. 3139
Phillips, R.A. see Parker, H.W. 2400
Piaskowski, S. 3166
Piccarolo, G. 4856
Picchi, C.G., and Barrett, W.H.G. 5761
Pickard, L.S. see Thatcher, R.C.
Pickard, P.A. see Côté, W.A., Jr.
Pielowski, Z. see Dzięciołowski, R.
Pieper, G.R., and Miskus, R.P. 5932
— see Larson, J.E.
Pierce, W.R. 1128
— see Steele, R.W.
Pierlot, R. 6165
Pierpoint, G. 106
Pikalkin, Ju.V. 6073
Pikalkin, V.M. 6073
Pilinovič, V.F. see Dročnev, Ja.G.
— see Gordeev, A.V.
Pinežskij, D.I. see Dem'janovskij, K.I.
Pinheiro, M.F. Vizeu 2657
Pinion, L.C. 4812, 6702
— see Laidlaw, R.A.
Pinney, T.S., Jr., and Peotter, G.W. 3759
Pintarić, K. 454, 5476
— and Zekić, N. 5470
Pires, C.L. da Silva 442
Pîrvescu, D. 977
— and Vişan, D. 5992
— see Negru, Ş.
Pisek, A., Larcher, W., and Unterholzner, R. 5254
Piskernik, M. 5365
Pis'mennyj, N.R. 867
Pita Carpenter, P.A. 1095, 1121, 6131, 6147
Pitcher, J.A., and Dorn, D.E. 3727
Pitikin, A.I. 2780
Pitkin, F.H. see Loewenstein, H.
— see McConnel, L.P.
Pitko, J., and Plíva, K. 6181
Pitman, G.B., et al. 6019
— see Vité, J.P.
Pittillo, J.D. 84
Piussi, P. 2195
Pjatnickij, S.S. 6781
— and Izjumskij, P.P. 3187
P'javčenko, N.I. 274-5, 5337
Plaisance, G. 1, 3235
Plass, W.T., and Burton, J.D. 3840
Platonov, G.M. 341
Platonova, E.G. see Šivrina, A.N.
Platt, W.D. see Cobb, F.W., Jr.
Platzer, H. see Göbl, F.
Platzer, H.B. 2386
— and Freyenhagen, H. 6847
Plavšić, M. 2808, 4372, 6178, 6481
— and Golubović, U. 4333
Plavšić, S.Ž. 3871
Plavšić, V. see Smit, S.
Pławińska, W. see Kędzierski, Z.
Plaza Pulgar, F. see Gutiérrez Oliva, A.
Pleines, W.E. 2812
Pletta, D.H. see Stern, E.G.
Plíva, K. 6180
— see Pitko, J.
Plomley, K.F., and Gottstein, J.W. 6460
— see Harada, H.
Ploštakova, L. see Valkov, D.
Plotnikov, V.L., and Polozov, M.I. 1375
Plotnikova, L.S. see Borodina, N.A.
Plouvier, V. 3358
Plumb, T.R. 2488
Plummer, G. 6119
Plumptre, R.A. 4758, 6249, 6257
Pluquet, E. 5971
Pluquet, H. 522
Pneumaticos, S.M., and Elers, T.L. 3107
Podger, F.D., Palzer, C.R., and Batini, F.E. 852
Podin', V.S. 5253
Podzorov, N.V. 592, 1695
Pogge, F.L. 897
Pogonowski, W. see Grzeczyński, T.
Pogoževa, T.A. see Nepenin, Ju.N.
Poissonet, J. see Godron, M.
Pokorny, F.A., and Perkins, H.F. 525
Poláčik, A. 2859
Polakowska, M. 346
Polakowski, B. 3604
Polge, H. 635, 2896, 2952, 6320
— and Illy, G. 4608
— and Millier, C. 2897
— see Harris, J.
Polhill, R.M. see Milne-Redhead, E.
Poljakov, A.N. 6073
Poljakov, N.E. see Docenko, A.P.
Poljakova, E.N. see Nikolaeva, M.G.
Poljakova, L.P. see Docenko, A.P.
Polk, R.B. 3422
Pollanschütz, J. 2776
Poller, S. 6254
— and Hoffmann, K. 4575
— see Patscheke, G.
Polončuk, M.S. 1976
Polozov, M.I. see Plotnikov, V.L.
Polster, H. see Lyr, H.
Polubojarinov, O.I. 1297
Poly, J. see Moreau, R.

Pomerleau, R., Bard, J., and Pelletier, R. 4127
— see Mehran, A. R.
Pominova, G. I., and Haritonov, V. V. 5745
Pomogaev, S. A. 679
— see Artamonov, Ju. G.
Pong Leng-ee 80
Ponjatovskaja, V. M. see Lavrenko, E. M.
Ponomarev, A. N. see Nekrasov, M. S.
Pons, A. see Serre, F.
Poole, A. L. 6144
Poore, M. E. D. 3608, 4927, 5382
Pope, R. B. see Wear, J. F.
Popescu, G., et al. 1484
Popescu, I., and Necşulescu, H. 758
— and Stelian, M. 3824
Popescu, N. D. 6351
Popescu-Zeletin, I. 2763, 2784
— and Dissescu, R. 2088
Popham, T. W. see Ursic, S. J.
Popo, A. 6053
Popov, O. see Statkov, N.
Popov, V. K. 1840
Popov, V. V. 3187
— see Vakurov, A. D.
Popović, B. 3853
— see Nõmmik, H.
Popovič, V. V. see Jacjuk, A. I.
Porter, J. E. 4042
Porter, J. W., and Anderson, D. G. 100
Porter, Q. N. see Nelson, P. F.
Porterfield, E. J. see Kormanik, P. P.
— see Steinbeck, K.
Portjanko, V. F., and Kostina, A. E. 3348
Posey, C. E. 2130
— and Goggans, J. F. 232
— see Goggans, J. F.
Poso, S. see Nyyssönen, A.
Post, A. see Delver, P.
Postner, M. 5930
Potapov, B. 4662
Potjarkin, L. P. see Konoplev, P. S.
Potrebić, M. see Mihailović, M.
Poulter, R. W. see Graf, D. I.
Pound, C. D. C. 3220
Powell, J. W. see Adesogan, E. K.
Powers, H. O. 5133
Powers, H. R., Hepting, G. H., and Stegall, W. A., Jr. 862
Powers, R. F. see Wiant, H. V., Jr.
Pozdnjakov (Pozdnyakov), L. K. 34, 2057
Pracna, J. 2850
Prakash, I., Purohit, K. G., and Kametkar, L. R. 5915
Prakash, S., Krishnam, P. S., and Tewari, K. K. 821
Prakash, U., and Tripathi, P. P. 6413
Prasad, K. K. see Sidhu, G. S.
Prasad, U. N., and Mehra, B. P. 660
Prasada, R. 5410
Prashad, B., Thapa, R. S., and Sen-Sarma, P. K. 1797
Pratt, D. J. see Thomas, D. B.
Pravdin, A. M. 1696
— and Petrov, N. F. 674
— see Lebkov, V. F.
Pravdin, L. F. 145
Prawitz, G. 1464
Preest, D. S. 586
Prentice, R. M. see Davidson, A. G.
Press, A. see Burley, J.
Prestemon, D. R. 1373
Preston, R. D. see Chowdhury, K. A.
Prevosto, M. see Castellani, E.
Price, D. W. 3307
Price, R. 1792
Prichananda, C. 1274
Pridnja, M. V. 4368
Prien, S. 609
Prieser, W. 6311
Priest, D. T. 3122
Příhoda, A. 5903
Prilipko, L. I. 3187
Prins, R. A. 5059
Prista, L. Nogueira, et al. 3167
Pritchett, W. L. see Haines, L. W.
Privalovskaja, G. A. see Gorovoj, V. L.
Pročko, P., and Borowy, R. 4942
Procter, J. 761
— see Borota, J.
Prodan, M. 1078, 2688, 2725, 6072, 6110
Prohorov, V. A. 6446
Prohorov, V. B. 692
Prokudin, Ju. A. see Harin, N. G.
Prolić, N. 2116
Pronevič, V. P. see Verenčikov, P. I.
Pronin, D. 1204
— and Vaughan, C. L. 3489
Proszt, S. 1969
— see Horvath, E.
Protopopov, V. V. 911
Protopopova, E. N. 433
Prouvier, M., and Monteil, G. 1396
Prpić, B. 2431, 3573
Prudič, Z. 363
Pruthi, K. S. see Masani, N. J.
Prutzer, E. 2074
Pryor, L. D. 236, 5459
— et al. 222
Pschorn-Walcher, H., Schröder, D., and Eichhorn, O. 5920
— and Zwölfer, H. 5924
— see Zwölfer, H.
Puchert, H. 5503
Puente E., J. M. de la see Palomares N., N.
Puhov, A. K. 6638
Pujos, A. 228
Pulikowski, Z. 4811
Pulinec, M. P. 2430
Punter, D. 854
Purcell, D. L. 3884
Puri, Y. N. 1519
— and Taneja, K. 3085
Purić, O. 5252
Purkayastha, B. K. 5672
Purkayastha, R. P. see Banerjee, S.
Purohit, K. G. see Prakash, I.
Purushotham, A. 6248
— and Kumar, S. 4553
— and Sekhar, A. C. 6501
— et al. 1468
Putnam, E. L. 5435

Quagliotti, L. 524
Quayle, D. B. 6496
Quednau, F. W. 947-8
Queisser, J. 3875
Quervain, M. de 6803
Quick, C. R. 4143, 5885
Quimby, M. W. see Persinos, G. J.
Quinn, C. J. 134
Quirk, J. T. 4640
— Blomquist, R. F., and Kozlowski, T. T. 4639
Quirk, J. T., Kozlowski, T. T., and Blomquist, R. F. 4636-8
Quon, K. K. 6584
— see Cserjesi, A. J.
Qureshi, I. M. 435, 5447, 6838
— and Yadav, J. S. P. 5615

Raabe, R. D., and Hurlimann, J. H. 2514
— Weinhold, A. R., and Wilbur, W. D. 841
Rackham, O. 3658
Rackwitz, G. 1595
Racz, J. see Volkert, E.
Raczkowski, J., and Stempień, C. 6334
Radecke, H.-R. 316
Radhakrishnan, P. V. see Karanjgaokar, C. G.
Rădoi, D. see Ceianu, I.
Radonjik [Radonjić], M. 2752
Radu, S. 5649
Rădulescu, S. 501
Radwan, M. A. 887
— Dodge, W. E., and Ward, H. S. 3817
Radwanski, S. A., and Wickens, G. E. 3508
Radzimiński, S. 2834
Raekelboom, E. L. see Istas, J. R.
Rafalski, H. J., Kirk, H., and Achterberg, W. 6648
— see Lehmann, G.
Rafalski, J. 1272, 6631
Raff, R. A. V., and Adams, M. F. 6579
— Herrick, I. W., and Adams, M. F. 4666
Ragg, J. M., et al. 1754
Raghavan, S. 3337
Ragnarsson, H. 2208
— see Bergthórsson, P.
Ragonese, A. E. 1716
— and Rial Alberti, F. 608
Ragonese, A. M. 6269
Rahceenka, I. see Kauraŭ, I. A.
Rahman, W., and Bhatnagar, S. P. 5074
Rahmanov, S. I., and Gorohovskij, K. F. 3945
Rahov, V. A., and Uspenskij, E. I. 1006
Rajasingh, G. J. 5594
Rajčev, A. 2859
— see Nikolov, S.
Rajendren, R. B. 4150
Rajgorodskaja, I. A. 4203
Rajkhowa, S. see Das, B. N.
Rajman, V. see Karahasanović, A.
Rajput, S. S. see Sekhar, A. C.
Rakin, A. G., and Mirošničenko, S. N. 4685
Rakitina, Z. G. 5256
Raknes, E. 3020, 6451
Ralston, C. W. see Blackmon, B. G.
— see Bonner, F. T.
— see Foil, R. R.
— see Moehring, D. M.
Raman, P. V. see Murti, V. V. S.
Ramanauskas, V. I., and Gradeckas, A. I. 3729
Ramanujam, C. G. K., and Rao, M. R. 2991
Ramarethinam, S., et al. 5136
Ramati, B. see Bidner-Barhava, N.
Rambelli, A. 1984, 5289
— see Palieri, M.
Rambo, R. see Williams, R. D.
Rametta, G. 5705
Ramsay, D. M. 4377

Ramsing, K.D. 6509
Ranatunga, M.S. 436
Rancurel, P. 4743
Randall, A.P. 915
—Hopewell, W.W., and Nigam, P.C. 4192
Randall, W.K. see Wright, J.W.
Raney, L.W. see Berry, R.E.
Ranft, H. 574
— see Dassler, H.-G.
Rangelov, K.N. 4781
Ranzenhofer, R. 3936
Rao, A.L. 5409
Rao, A.R., and Malaviya, M. 201.5195
— Malaviya, M., and Menon, V.K. 1910
— and Sharma, M. 5191-2
Rao, C.S. see Row, L.R.
Rao, C.V.N. see Bhakare, H.A.
Rao, D.M.R. see Narayanamurti, D.
Rao, L.R. see Row, L.R.
Rao, M.R. see Narayanamurti, D.
— see Ramanujam, C.G.K.
Rao, T.V.P. see Murty, V.K.
Rao, V.P., and Bennett, F.D. 5974
— see Bennett, F.D.
Raper, K.B., and Fennell, D.I. 1771
Rappard, F.W. 2087
Rapson, W.H. see Wayman, M.
Rasch, E. see Hinselmann, D.
Raskatov, P.B. 2859
Rasmussen, K. see Petersen, L.
Rasmussen, R.A., and Hutton, R.S. 19
Rasmussen, S. 4749, 6003
Rastorgueva, E.Ja. see Sudačkova, N.E.
Ratsch, H. see Sucoff, E.
Ratsch, H.C. see Larson, J.E.
Rattner, F., and Schaffer, E.L. 1268
Raupach, M. 5269
Rawat, B.S., and Jain, N.C. 1377
Rawat, M.S., and Kedharnath, S. 5549
Rawlinson, A.S. 5725
Ray, B.N., and Pal, A.K. 3161
Razin, G.S. 4396
Read, D.J. 1076, 5852-3
Read, H.E.G. 3053
Read, R.A. 3719
— and Bagley, W.T. 546, 3776
Reardon, G.F. see Suddarth, S.K.
Rebane, H. 3616
Rebeyrol, Y. 1664
Redding, H. 4042
Redhead, J.F. 5291
Redinger, L. see Rieche, A.
Redmond, D.R., and Gardner, J.A.F. 4945
Redmond, J. 4477
Reece, P.O. see Booth, L.G.
Reeks, W.A. see Davidson, A.G.
Reeves, R.J.C. 3445
Reeves, R.M. 53
Reginster, P. see Weissen, F.
Řehák, J. 1139
Rehfeldt, G.E. see Lester, D.T.
Rehfuess, K.E. 5265-6
Rehman, M.A., and Ghosh, D.P. 6315
Reichhelm, W. see Sandermann, W.
Reid, D.M., and Burrows, W.J. 5112
Reid, R.W., Whitney, H.S., and Watson, J.A. 4261
Reifer, I. 5086
Reifsnyder, W.E. 3250
Reigner, I.C. see Lull, H.W.
Reilly, C. 268
Reines, M. see Burkhalter, A.P.
Reinhard, L.V., Zabud'ko-Reinhard, T.N., and Travleev, A.P. 3302
Reinhart, K.G. see Lull, H.W.
Reinhold, A. 4413
Reinhold, F. 2759
Reisch, J. 4272, 4948
—see Franz, J.M.
Reissig, H., and Höhne, H. 5619
Rekunov, V.S. 1195
Réman, Z. 711
Remeijn, J.M. 15
Remezov, N.P., Bykova, L.N., and Smirnova, K.M. 3548
Remington, C.L. 3324
Rennel, J. see Bergman, J.
Rennie, P.J. 3547
Renteira R., M. see Barghoorn, A.W.
Renwick, J.A.A. 1015
Repšis, I., and Grigaljunas, I. 2702
Resch, H., Choong, E.T., and Smith, H.H. 6633
— and Ecklund, B.A. 1544
— and Huang, S.-M. 6418
Retkes, J. 1867, 2179
— see Bánó, I.
Revington, E.D. 3989
Rey, L. 4285, 6055
Reynolds, E.R.C., and Henderson, C.S. 1778
— and Leyton, L. 3309
Reynolds, H.G. 2583
Reynolds, R.R. 2052
Reznikov, P.K. 700
Rial Alberti, F. see Ragonese, A.E.
Říbal, M., and Hanuš, S. 2578
Riberolles, J.P.de 6433
Ricard, J.L. 3066
— See, T.E., and Bollen, W.B. 6559
Rice, J.T. see Snyder, J.L.
Rice, R.E. 4256
Rice, W.W., and Cooper, G.A. 4650
Richards, B.N. 2294
— and Bevege, D.I. 3864, 5597
Richards, E.G., and Tinson, E.J.F. 4465
Richards, W.R. 935, 937
Richardson, B.Y. 3732
— see Stokes, C.M.
Richardson, H.H., and Roth, W. 5504
Richardson, S.D. 5146, 6831
Richens, R.H. 1934
Richesson, M.A., Clapp, L.L., and Miller, R.L. 1273
Richmond, C.E. see Lyon, R.L.
Richter, A. 6850
— and Schwartz, E. 4957
Richter, D. 4265
Richter, G. 2674
Richter, J. see Liese, W.
Richter, R. see Thieme, H.
Rickson, F.R. 86-7
Ridé, M. 2519
— and Eskandari, F. 2533
— see Eskandari, F.
Rideout, E.E. 2699
Rieche, A., Redinger, L., and Lindenhayn, K. 4578
Riedl, O. 5653
Riehl, G. 6774
— see Kehr, E.
Riewendt, M. see Schulz, W.O.
Riffer, R. 6386
— and Anderson, A.B. 6385
Riffle, J.W. 1069, 6063
— and Springfield, H.W. 5513
Rikkonen, P. 6117
Riney, T. 3338-9
— and Hill, P. 6808
Ringselle, S. see Hedqvist, K.-J.
Rinkevičus, A.A. see Levin, É.D.
Riom, J. see Coutin, R.
Rios, J., Welker, J.R., and Sliepcevich, C.M. 5786
Ripley, T.H., and Halls, L.K. 6074
Riqué, T., and Tinto, J.C. 4845
Rishbeth, J. 2520
Risvand, J. 1184
Ritchey, J.R. see Adams, R.S.
Ritchie, D. 4734
Ritchie, E. see Diment, J.A.
Ritman, E.L. 6694
Ritter, G. 4100, 5619
— and Miething, E. 155
Ritter-Studnička, H. 5367
Rive, J.L. 988
River, B.H. see Krier, J.P.
Riveros, N.T. 3190
Rjabčikov, G.Ja. see Garcman, I.N.
Rjazanceva, P.A. see Petrov, S.A.
Roark, C.B. see Bateman, B.A.
Robak, H. 3708
Robards, A.W., and Humpherson, P.G. 3359, 4512
Röbbel, H. 3200
Robbins, W.C. see Young, H.E.
Roberds, J.H., Zobel, B.J., and Kellison, R.C. 1869
Robert, R. see Vishnu-Mittre
Roberts, P.J., Bridges, W.L., and Burford, A.O. 3069
Roberts, R.M., and Loewus, F. 97
Robertson, C.F. see Burkhalter, A.P.
Robertson, D.Y.M. 4392
Robertson, I. see Gilfedder, J.
Robertson, J.A. 3883
Robertson, J.S. see Birse, E.L.
Robinson, F.S. 3061
Robinson, J.B.D. 4944
— and Freeman, G.H. 1816
Robinson, T.S. 27
Robinson, W.M. 3885
Robles Ruíz, A.E. see Caballero Deloya, M.
Robyns, A. 196-7, 1924
Robyns, W. 3459
Roche, L. 5469
Rodda, E.D. 1442
Roden, D. 6772
Rodgers, C.A. 5705
Rodin, B.E. 4567
Rodin, J.O. see Silverstein, R.M.
Rodin, L.E., and Bazilevich [Bazilevič], N.I. 5275
Rodrigues, F. see Santos, B.dos
Rodríguez Caballero, R., and Rodríguez Caballero, M. 1164
Rodríguez Marcano, A. 5551
Roe, A.L. 1114
Roediger, K.-J. 3849
Roettgering, B. see Wert, S.L.
Roff, J.W. 3101
Rogaliński, K., and Kubiak, M. 6598
Rogers, I.H. 6383, 6744
— see Kutney, J.P.
Rogers, J.D. 5868
Rogers, L. see Ellertsen, B.W.
Rogers, M.T. 3036
Rohmeder, E. 807, 2437
— and Schönborn, A. von 1882
Röhrig, E. 291, 800, 1954

Rohringer, R., and Samborski, D. J. 2475
Roig, F. A. see Ruiz Leal, A.
Roik, Ja. V., and Kostjuk, Z. V. 421
Roitto, Y. 732
Roll-Hansen, F. 4112
— and Roll-Hansen, H. 4090
Roll-Hansen, H. 4094
Roller, K. J. 1877
Rollins, M. L. 6274
Romberger, J. A. see Varnell, R. J.
Romell, L. G. 2324
Romine, D. S. see Dotzenko, A. D.
Ronay, E. 5401
Roncadori, R. W. 5876
Ronco, F. 4259
Ronkov, B. 2859
— and Evangelatova, N. 5084-5
Roonwal, M. L., Chatterjee, P. N., and Thapa, R. S. 4746
Roosen, P. 4668
Rosas Mata, H. 6240
Roščin, N. P. 6422
Rose, A. L. 2333
Rose, W. E. 2658
Rose Innes, R. see Mabey, G. L.
Rosnev, B. 5167
Ross, A. see Phelps, W. R.
Ross, D. A. 4236, 4243
Ross, E. W. 840, 2522
Ross, H. H. 3200
Ross, J. H., and Brenan, J. P. M. 1929
Ross, R. B. 4859
Rossi, D. 5956, 5997
Rossing, W. 3951
Rossmässler, W. 6788
Roth, C. 4976
Roth, H. see Richardson, H. H.
Roth, L. F. 2492
— see Beckman, K. M.
Roth, L. W. see Adams, D. H.
Rothacher, J., Dyrness, C. T., and Fredriksen, R. L. 3316
— see Levno, A.
Rothemund, H. 752
Roudier, A. J., and Eberhard, L. 1328
Rouquerol, T. 3557
Roure, G. 3340
Rousseau, J. see Legault, A.
Roussel, L. 3251, 3652
Roux, D. G. see Drewes, S. E.
— see Pacheler, K. G. R.
Rovelli, B., and Vaughan, G. N. 1639
Rovner, B. see Bach, L.
— see Littleford, T. W.
Rovskij, V. M. 1900
Row [Rao], L. R., and Rao, C. S. 5077
— see Sastry, C. S. P.
Rowan, A. A. 3940
Rowan, K. S. see Shepherd, K. R.
Rowan, S. J. 5877
— see Brown, R. A.
Rowe, J. J. 4167
Rowe, J. S., and McCormack, R. J. 4926
Rowinski, B. see Pahlitzsch, G.
Rowland, R. 3927
Rowley, J. R. see Allessio, M. L.
Roy, R. P., and Jha, R. P. 1903-4
Rozenberg, V. A., and Ivanova, I. T. 5375
Rožkov, A. S. 904
Rozmej, Z. see Foks, J.
— see Kwiatkowski, A.
— see Masiulanis, B.
Rozsnyay, Z. 6172
Rubcov, A. F. 3475
Rubcov, N. I. 2267, 3187
Rubcova, Z. I. 1775, 3306
Rubner, H. 1656, 4848
Rubner, K. 3663
Rudinsky, J. A. see Caster, K. L.
— see Kline, L. N.
— see Stoszek, K. J.
Rudloff, E. von 3352, 5073
— Irving, R., and Turner, B. L. 149
Rudman, P. 6293
— Costa, E. W. B. da, and Gay, F. J. 1370
Rudnev, D. F., and Smeljanec, V. P. 5935
Rudnicki, J. 2815
Rudolf, P. O. 1693
Rudolph, T. D. 4029
Ruggeri, C. 524
Rühl, A. 5239
Ruiz Leal, A., and Roig, F. A. 5769
Rukmini, M. S. see Narayanamurti, D.
Rule, A. 4889
Rumbold, A. L. 6174
Rumsey, F. 6191
Runeberg, L. 6738, 6846
Rupp, P. 3623
Rusakova, R. P. see Fedoriščev, T. I.
Russell, J. S., Moore, A. W., and Coaldrake, J. E. 5272
— see Moore, A. W.
Ruth, R. H. 5249
Rutherford, B. M. 4934
Rutkowski, J. D., and Głowiak, B. 3034
Ryan, G. F. 3793
Ryan, T. R., and Haygreen, J. G. 6514
Ryberg, M. 3614, 6674
Ryke, P. A. J., and Loots, G. C. 51
— see Berg, R. A. van den
Rykunin, S. N. 3041
Ryley, T. F. see Cokley, K. V.
Rypaček, V. 4721
Rysin, L. P. 301
— and Kovalenko, Z. M. 5343
Ryvkin, B. 5754
Rzeźnik, Z. see Nebe, W.

Saari, E., and Seppälä, A. 4
Saatçioğlu, F. 3674, 3713-4, 3725, 3872
Šabarov, A. A. 299
Šabău, V. 3896
Šabel'skaja, È. F. see Godnev, T. N.
Sabo, E. D. 591
Sacenieks, R. Ja. see Matuzanis, Ja. K.
Sachs, I. B. see Kollmann, F. F. P.
Sachs, W. 748
Sachsse, H. 2912
Sackett, S. S., and DeCoste, J. H. 4035
— Webster, H. H., and Lord, W. B. 2459
Sacré, E. 1564
Sadoh, T. 1494
— and Christensen, G. N. 1282
— and Kingston, R. S. T. 1283
— and Urakami, 6564
Sæther, R. 1671
Šafar, J. 3188, 3659
Safarov, I. S. 204
Saga, M. 6261
Sagmuller, C. J., and Sopper, W. E. 3869
Šagreiya, K. P., and Nath, B. 5417
Šahanova, R. K. see Korol'kov, I. I.
Sahay, B. K. 6212
Saiki, H. 6294
— and Nakato, K. 1281
St. John, H. 1920, 3472
Saito, H. see U(y)emura, T.
Saito, K. 371
Saito, M. see Sakai, A.
Sakai, A. 2427, 5258
— and Saito, M. 1837, 2428
Sakai, K.-I., and Mukaide, H. 3407
— Mukaide, H., and Tomita, K. 5300
Sakai, S., et al. 2643
Sakamoto, T. see Satoo, S.
Sako, S., and Minami, J. 5378
Saks, K. A. 2143
Sakuno, T. see Goto, T.
— see Shinohara, T.
Sakurai, T., Nakamura, S., and Takahashi, A. 5708
— see Takahashi, A.
Salamon, M., and Kozak, A. 6323
Salandy, C. 2155
Salas, S. see Fournier, L. A.
Salazar C., A. 3506
Saleh, T. M., Leney, L., and Sarkanen, K. V. 1318
Salehuddin, A. B. M., and Barefoot, A. C. 6475
Sali, E. 1669
Salinas Quinard, R. see Peterson, R. S.
Salleh bin Mohd. Nor 4901, 6790, 6794
Salminen, È. O. see Baranov, A. I.
Salminen, J. 2408
— see Kahala, M.
Salo, E. O. 1814
Salomon, G. see Houwink, R.
Salt, G. A. 826, 3749
Salt, R. W., and Kaku, S. 1959
Salter, P. J., and Goode, J. E. 251
Saltymakova, G. I. see Smirnov, A. V.
Salwén, N. 3887
Samborski, D. J. see Rohringer, R.
Samek, J. 4711, 4784
Samek, V. 331
Sameshima, K., et al. 6296
Samojlova, E. M. 3554
Samojlovic, G. G. 6781
Sampaio, F. de Melo 5445
— and Frade, E. Carita 3679
Samset, I. 3929
— and Strømnes, R. 3931
Sanchez, A. 4164
Sánchez-Viesca, F., Díaz, E., and Chávez, G. 1831
Sancho, R. see Alonzo, A. E.
Sander, D. H. 3544
Sandermann, W., Bruns, K., and Reichhelm, W. 1354
— and Lange, W. 3098
— Simatupang, M. H., and Wendeborn, W. 6389
Sanders, C. J. 4215
Sandrasegaran, K. 2718, 4317
Sandret, F. G. 6765
Sandvik, M. 516
Sandwith, N. Y. 1923
Sanev, V. I. see Grube, A. E.
Sanfilippo, E. 3963
Sannikov, A. A. 1381
Santoro, F. H. 6035
Santos, B. dos, and Rodrigues, F. 2322
Santos Ruiz, A. see Dean Guelbenzu, M.
Šapiro, D. K., et al. 649
Šapiro, I. I. 1496
Saplala, V. L. 2607
Sapožnikov, A. P. 5375

Saranthus, H. M. see Malac, B. F.
Sarasola, A. A. 1716
Sarkanen, K. V., Chang, H.-M., and Allan, G. G. 6377
— et al. 6376
— see Saleh, T. M.
Sarlin, P. 1117
Sartz, R. S. 5763
Sarv, A. see Ilves, E.
Sarvas, R. 1888, 2030, 4952
Saryj, M. A. 2012
Sas, B. 515
Sasaki, H., and Maku, T. 2961
Sasaki, S. 4060
— and Kozlowski, T. T. 805, 4061
— see Kozlowski, T. T.
Sašek, V. 2501
— and Musílek, V. 5820
Sassaman, R. W., and Chappelle, D. E. 4421
Sastry, C. S. P., and Row, L. R. 1351
Satchell, J. E., and Lowe, D. G. 47
— see Graff, O.
Sato, A. see Yavorsky, J.
Sato, S. 4149
— see Terazawa, S.
Sato, T. see Toda, R.
Satoo, S. 2314
— and Sakamoto, T. 2226
Satoo, T. 312, 325, 2056
Saucier, J. R., and Hamilton, J. R. 1244
— see Taras, M. A.
Sauer, G. 5764
Sauer, H. H. see Heftmann, E.
Saul, G. H. 5553
Saunders, J. C. 6800
Saunders, R. G., and Hall, G. S. 6610
Sauter, J. J. 113
— and Braun, H. J. 5104
— see Beisel, G.
Savčenko, A. M. 2038
— and Butkute, A. P. 403
Savić, Đ. 3871
Savolainen, R. 3930
Savory, J. G. 3094
— et al. 4732
— see Nash-Wortham, J.
Savrova, L. A. 5901
Săvulescu, A., Negruţiu, A., and Văcaru, G. 3410
Saylor, L. C. 5186
— and Koenig, R. L. 170
Saxer, A. 4976
Scallan, A. M. see Stone, J. E.
Scamoni, A. 5235
Scaramuzzi, G. 4555
— see Valenziano, S.
Ščeglov, V. F. 1549
Ščepin, A. 2374
Ščepot'ev, F. L., and Navalihina, N. K. 5182
Ščerbakov, A. I. 3116
Ščerbakov, N. M. 1079
Ščerbatjuk, A. S., and Ščerbatjuk, N. V. 2126
Schaad, N. W., and Wilson, E. E. 2551
Schaffer, E. L. see Rattner, F.
Schairer, E. 1758
Schalin, I. 597, 3743
Scháněl, L. 4730
— see Tesařová, M.
Scharpf, R. F., and Parmeter, J. R., Jr. 2439
Schearer, R. C. 548
Schedl, K. E. 3329-30
Schedl, W. 1039
Scheffer, T. C., and Clark, J. W. 4706
Scheinmann, F. see Grice, R. E.
— see Jackson, B.
Schenck, W. see Petermann, H.
Schenk, J. A., Giles, R. H., Jr., and Johnson, F. D. 5931
Scheumann, W., and Hoffmann, F. 3522
— see Hoffmann, K.
Scheurer, S. 2353
Schie, R. van 4298
Schieber, E. 880
Schik, J.-P. see Manz, A.
Schimitschek, E. 6041
— and Wienke, E. 2614
Schimke, H. E., and Dougherty, R. H. 2473-4
Schindler, C. 4408
— see Hildebrandt, G.
Schindler, U. 888
Schirm, W. 6176, 6182
Schirmer, R. 716
Schlegel, D. E., Smith, S. H., and Zoeten, G. A. de 2475
Schlindwein, A. 4933
Schlösser, L.-A. 4151
Schlüter, H. 362, 2293
Schmelzer, K. 5908
Schmidt, A. 6080
Schmidt, F. H. 1020
Schmidt, G. 5401
— Lottge, W., and Kramer, W. 5536
Schmidt, H. 1063
— see Kummerow, J.
Schmidt, J. 3114
Schmidt, K. 6176
Schmidt-Vogt, H. 1880, 3728, 6172
— and Gürth, P. 2256
Schmidtkunz, O. 5651
Schmittner, F. 4899
Schmotzer, U. 1170
Schmutzler, W. 4661, 6486
Schnaider, Z. 945
— and Śliwa, E. 4224
Schneble, H. 3847
Schneider, A. 6172, 6630, 6642
— see Kerscher, E.
— see Kollmann, F.
— see Kollmann, F. F. P.
Schneider, E. 5683
Schneider, G. see Mathies, J. B.
Schneider, H. 6363
Schneider, K. 4948
Schneider, T. 2425
Schnell, R. 5303
Schniewind, A. P. 1442, 4565-6
Schnock, G. 4858, 5357-8, 5361
— and Galoux, A. 5354
— see Galoux, A.
— see Grulois, J.
Schober, R. 450, 2302
Schodde, R. 5220
Schoelzel, S. see Kehr, E.
Schoenenberger, A. 5648
— see Assche, J. van
— see Marion, J.
Schoenfeld, P. H. see Jansen, E. C.
Scholander, J. 673, 3978
Scholander, P. F. 5088
Scholes, W. A. 5789
Scholten, H. 5821
Scholz-König, E. 3298
Schölzel, S. see Kehr, E.
Schomaker, C. E. 4983
Schönau, A. P. G. 3800
Schönbach, H., and Bellmann, E. 3426
Schönberg, G. 3784
— see Zeppenfeld, G.
Schönborn, A. von see Rohmeder, E.
Schönfeld, T. see Broda, E.
Schönhar, S. 762, 4083, 4114
Schönherr, J. 6014
Schoonhoven, L. M. 3324
Schöpfer, W. 1093, 1103, 4326
Schorning, F. see Stegmann, G.
Schread, J. C. 906
Schreiber, L. R. 531
— and Stipes, R. J. 4126
— see Stipes, R. J.
Schreiner, E. J. 2022
Schreuder, H. T. 2724
Schreyer, G. 401
Schröck, O. 159, 5235
Schröder, D. see Pschorn-Walcher, H.
Schroder, J., and Thalenhorst, W. 2585
Schroeder, H. A., and Hansen, E. F. 6696
Schroeder, R. 4468
Schuerch, C. 6538
Schulenburg, K. 474
Schultz, R. P., and Wilhite, L. P. 2263
— and Woods, F. W. 296
Schultze-Dewitz, G. 4735, 6592
Schulz, G. 4705
Schulz, J. P. 2133
Schulz, W. O., and Riewendt, M. 4751
Schulze, E. D. 1767
— Mooney, H. A., and Dunn, E. L. 3371
Schumacher, R. 5451
Schumann, D. R., and Englerth, G. H. 3039, 4672
Schütt, P. 2562
— and Neumann, P. 3768
Schütze, M. 5401
Schuurmans, E. see Pharis, R. P.
Schvester, D. 1077
Schwartz, E. see Richter, A.
Schweigler, W. 743
Schweitzer, D. L. 4975
— Lundgren, A. L., and Wambach, R. F. 4430
Schwenke, K.-T. 6205
Schwerdtfeger, F. 3935
— and Ehrhardt, W. 1031
Schwotzer, W. 2836
— and Kumin, G. 1190
— see Tromp, H.
Ščiglovskij, B. see Chtchiglovsky, B.
Ščipanov, P. S. 5739
Scora, R. W. see Vasek, F. C.
Scott, B. I. H. 100
Scott, C. W., and Palmer, R. W. V. 1156
Scott, G. A. 4691
Scott, J. T., and Holway, J. G. 352
Scott, S. J., and Hay, G. W. 4582
Scowcroft, P. G., Murphy, J. L., and Biddison, L. R. 2465
Scurfield, G. 5862, 6288
Sedelmaier, K. 4468
Sedlak, O. 751
See, T. E. see Ricard, J. L.
Seehann, G. 1503
Seeliger, I. 282
Sefastsson, J. 4451
Segebaden, G. von 1185
— Strömnes, R., and Winer, H. I. 2363
Seger, E. 1734
Segur, J. A. 4428
Seheult, L. R. 3225

Sehgal, H. S., Sen, M., and Bakshi, B. K. 6594
Seibt, G., et al. 5618
Seidl, S. 709
Seifert, K. 1361, 6585
Seikel, M. K., Hostettler, F. D., and Johnson, D. B. 6398
Seitsonen, S. 6275
Sekawin, M. see Castellani, E.
Sekhar, A. C. 6356
— and Jain, H. C. 1262
— and Negi, G. S. 2967
— and Rajput, S. S. 1279, 6362, 6364, 6421
— and Shukla, N. K. 1261, 1310
— see Purushotham, A.
Sekiya, Y. see Inoue, Y.
Seleznev, Ju. N. see Zaharenkov, F. E.
Selga, D. 51
Selik, M. 3379, 3467
Seljag-Sosonko, Ju. R. 5245
Seljapin, F. N. see Birjukov, M. V.
Sell, J., and Kühne, H. 6406
— see Kübler, H.
Selochnik [Seločnik], N. N. 2546
Semana, J. A., Escolano, J. O., and Monsalud, M. R. 1583
Semečkin, I. V. 1079
Sen, M. see Sehgal, H. S.
Senčilo, Ju. Ja. see Koval'čuk, L. M.
Seneta, W. 3400
Senft, J. F., and Suddarth, S. K. 4681
Sengalevič, G. 944
Senić, R., and Mihajlović, M. 6762
Senkevič, A. A. 6781
Sen-Sarma, P. K. see Prashad, B.
Senyk, J. P. see Kabzems, A.
Seppälä, A. see Saari, E.
Seppovaara, O. 3129
Serebrjakov, F. I. see Sus, N. I.
Serebrjakova, L. K. 5298
Serrand, W. see Kollmann, F.
Serrão Nogueira, C. D. 5969
Serre, F., Lück, H. B., and Pons, A. 4385
Serry, V. 6229
Service, G. 6679
Seshadri, T. R. see Datta, S. C.
— see Madhav, R.
— see Murti, V. V. S.
Šestakova, V. A. 513
Seth, S. K., Dabral, B. G., and Nath, P. 4988
— see Kulkarni, D. H.
Seth, V. K. 5624
Seto, K., and Nozaki, K. 1410
Seutin, E., and Baurant, R. 934
— see Baurant, R.
Ševčenko, S. V. 4102
Ševčik, J. 6192
Shafer, E. L., Jr. 3210
— and Hamilton, J. F., Jr. 6814
Shah, J. J., and Thulasy, K. S. 138
Shah, R. S. see Jain, N. C.
Shaikh, M. U., and Morrison, F. O. 1051
Shain, L. 2519, 4107
Sharma, A. see Chawla, J. S.
Sharma, B. M. 1749, 5293
Sharma, M. see Rao, A. R.
Sharma, M. L., and Laviolette, R. 5945
— O'Neil, L.-C., and Laviolette, R. 4195
— see Martel, P.
Sharma, M. N. see Tewari, M. C.
Sharma, P. C. 993
Sharma, R. P. see Pande, J. N.
Sharma, Y. M. L. 2147, 2245
— see Sundar, S. S.
Sharp, W. M. see Jordan, J. S.
Shaw, C. G. see Wicker, E. F.
Shaw, H. K. A. 5219
— and Forman, L. L. 1922
Shaw, S. P. 5058
— see Stiteler, W. M., Jr.
Shea, K. R. see Childs, T. W.
Shea, P. J. see Lyon, R. L.
Sheikh, M. I., and Khan, M. 4865
Shekleton, F. J. 6173
Shelbourne, C. J. A. 1894
— see Wedel, K. W.
Shelton, F. J. see Dibuz, J. J.
Shepherd, K. R. 5108
— and Rowan, K. S. 122
Sheppard, D. R. J. see Grant, P. K.
Sher, S. A. see Allen, M. W.
Sheridan, W. L., and McNeil, W. J. 5062
Sherk, L. C. 5655
— see Ouellet, C. E.
Sherratt, H. S. A. see Leonard, B. E.
Sherry, S. P., and Ossowski, L. L. J. 4219
Shibata, M. 1914
Shibukawa, K. see Ito, K.
Shidei, T. see Kira, T.
— see Tsutsumi, T.
Shields, J. A. see Desai, R. L.
Shields, J. K. 3091, 6599, 6652
— and Shih, M. 4722
Shigo, A. L. 2512, 4095
Shih, M. see Shields, J. K.
Shillito, J. F. see Taylor, J. C.
Shimada, M. see Higuchi, T.
Shindel, H. L., and Sopper, W. E. 5036
Shinohara, T., Goto, T., and Sakuno, T. 6455
Shinozaki, A., and Yamaguchi, N. 6824
Shinozuka, M. see Okuma, M.
Shioya, T. 4852
Shipman, R. D., and Eichert, J. P. 623
— see Dunlap, W. H.
Shivaramakrishnan, V. R. see Chatterjee, P. N.
Shoemaker, R. A. 3453
Shoji, Y. see Matsuoka, S.
Shorthouse, M. see Peters, R. A.
Shoulders, E. 3590, 3779, 3865, 5495
— see Jorgensen, J. R.
Shrivastava, S. S., and Choubey, L. K. 6228
Shukla, N. K. see Sekhar, A. C.
Siddiqui, K. M. see Vidakovic, M.
Sidhu, G. S., and Prasad, K. K. 1347
Sieben, H. U. see Krahmer, R. L.
Sieder, P. 3810
Siegel, W. C. 6828
Siegerist, H. 6217
Sierpiński, Z. 2440
Siimes, F. E. 1542
Sika, A. 428
Sikkel, D. 1690
Sikora, A. see Kochman, J.
Sikora, B. 1088, 2785
Šikov, K. 1127
Silen, R. R. 5487
Silkin, L. Ja. see Četverikov, A. G.
Sillerström, E. 389
Silman, I. see Green, D. E.
Silva, F. Azevedo e, and Nogueira, C. D. Serrão 5955
Silva, J. M. de Azevedo e, see Vaz, A. L. Castelão
Silva, L. B. de, see King, T. J.
Silverborg, S. B. see French, W. J.
Silversides, C. R. 5738
Silverstein, R. M., Rodin, J. O., and Wood, D. L. 1025
— et al. 6018
Silvester, F. D. 1300
Sima, P. 5732
Simak, M. 5501
— see Simančík, F.
Simančík, F. 313, 3746
— Bevilacqua, B., and Simak, M. 3755
Simatupang, M. H., Dietrichs, H. H., and Gottwald, H. 1364
— see Sandermann, W.
Šimič, P. 1233
Simionescu, A. 1030, 4267, 6024
Simmonds, F. J. 5795
Simms, D. L., and Law, M. 6313
Simon, K.-H. 3252
Simon, M. 466
Simončić, M. 4031
Simonen, M. E. 4960
Simonett, D. S. see Morain, S. A.
Simonov, A. S. 4659
Simonov, G. P. see Gejdeman, T. S.
Simons, R. W. see Perry, T. O.
Simpfendorfer, K. J. 4928
Simpson, A. W. 4000, 5450
Sims, H. P. 2255
— see Cayford, J. H.
Sims, W. G., and Benson, M. L. 1149
— see Benson, M. L.
Simson, B. W., and Timell, T. E. 2975
— see Côté, W. A., Jr.
Simson, I. I. 1418
Šimunović, N. 2329, 3898
Sinadskij, Ju. V. 921, 2676
Sinclair, D. 1617
Šindelář, J. 1913
— and Hochmut, R. 2613
Sinden, J. A. 1133
Singh, B. see Bakshi, B. K.
Singh, K.-D. 5148
Singh, M. M. 1578, 6146
— see Guha, S. R. D.
Singh, P. see Chatterjee, P. N.
Singh, R. V. see Agarwala, V. P.
Singh, S., et al. 876
— see Bakshi, B. K.
Singh, S. N., Asthana, M. N., and Bhatia, D. N. 2390
Singham, S. S. 5682
Sinkevič, A. L. 2859
Sinko, M. see Stefansson, E.
Sinues, B. C., and Domingo, I. L. 2442
Sioumis, A. A. see Johns, S. R.
Šípoš, J. see Koberle, M.
Sirakov, G. 4305, 4388
Sircar, P. see Jotwani, M. G.
Sirén, G. 389
Siriban, F. R., Laxamana, M. G., and Mata, P. G. 6613
Širjaeva, G. A. 1826-7
Širnin, V. K. see En'kova, E. I.
Širotkin, Ju. D. see Nesterovič, N. D.
Šiškov, I. T. see Kjučukov, G. B.
Šitova, A. E. 1543
Šivrina, A. N. 3166
— and Platonova, E. G. 3166
Siwek, K. see Babicki, R.
Sjödahl, L. 6833
Sjolte-Jørgensen, J. 3827

Škaar, H. 3921
Skalenko, I. G. see Čiževskij, M. P.
Skjelmerud, H. 4468
Skog, R. E. 5423
Skoklefald, S. 3669
Skolmen, R. G. 1536, 6260, 6308
Skorić, A., Hajdin, Z., and Martinović, J. 5569
Skoupý, J. 5552
Skråmo, G. 6101
Skrjabina, A. A., and Larina, T. G. 662
Skuhravá, M., and Skuhravý, V. 2681
Skvorcov, A. K., and Golyševa, M. D. 226
Slabaugh, W. H. see Ching, T. M.
Slachmuylders, D. 4466
Sláma, M. see Novák, V.
Slankis, V. 1989
Ślaski, K. 3181
Slee, M. U. 5547
— and Nikles, D. G. 3419
Slemnev, N. N. see Kobak, K. I.
Sliepcevich, C. M. see Rios, J.
Śliwa, E. see Schnaider, Z.
Slobodjan, M. P. 353
Služiteleva, V. N., and Nepenin, Ju. N. 6688
Smaljukas [Smaliukas], D. Ju. 648
Smalley, G. W. 4364
Šmeljanec, V. P. see Rudnev, D. F.
Smelko, S. 6107
Smerlis, E. 5894
Smetanin, A. N. 972
Smilga, Ja. Ja. 2884
Smirnoff, W. [A.] 1054-6, 4182, 4191, 4222, 4283, 5979, 6054
Smirnov, A. V., Grigoruca, E. E., and Saltymakova, G. I. 3581
Smirnov, V. N., Belova, K. V., and Patrikeev, E. I. 3269
Smirnov, V. V. 1750, 2274
— and Alekseev, V. I. 4351
Smirnova, K. M. see Remezov, N. P.
Smirnova, V. A. 1957
Smit, S., and Plavšić, V. 5840
Smith, C. N. 2589
Smith, D. M. 2883
Smith, D. N., and Cockcroft, R. 3067
Smith, D. R. 2332
Smith, E. 4468
Smith, G. A. see Laidlaw, R. A.
Smith, H. C. 3595
Smith, H. H. see Resch, H.
Smith, J. A. 6849
Smith, J. H. G. 4462
— Walters, J., and Haddock, P. G. 5555
— see Nautiyal, J. C.
Smith, K. M. 913, 5904
Smith, L. F. 3830
Smith, M. K., and Morton, D. H. 6283
Smith, N. A. 6703
Smith, R. B., and Craig, H. M. 5809
Smith, R. F. 140
Smith, R. H. 1336, 2983, 4258
Smith, R. S. 4725, 6581
Smith, R. S., Jr. 2526, 4089
— see Bega, R. V.
Smith, R. W. 630
Smith, S. H. see Schlegel, D. E.
Smith, V. K. 6620
Smith, W. E. 5799
Smolák, J. 5905
Smoljanickij, L. Ja. 2014
Smólski, S. 3181
Smythe, S. L. 5806
Snodgrass, J. D. see Krahmer, R. L.
Snowdon, P. 82
Snyder, E. B. 5159
— Wakeley, P. C., and Wells, O. O. 451
Snyder, J. L., Rice, J. T., and Hart, C. A. 1600
Snyder, W. E. 3782
Snytkin, G. V. 5781
Soan, G. E. 3042
Sobolev, I. V., and Sotikova, L. G. 1382
Sobolev, Ju. S. 1313
Sobotka, A. 2438
Sochor, M. see Kubinsky, E.
Soeharlan, A. 4402
Soeranggadjiwa, M. H. 2715
Soerianegara, I. 3603
Sogo, M., and Hata, K. 6743
Sohi, S. S. 5964
Sokolov, A. A. 4998
Sokolov, D. V. 5814
Sokolov, G. A. 79
Sokolov, O. M., and Bogomolov, B. D. 1322
Sokolova, E. S. 5900
Sokolova, N. I. see Tkačenko, G. V.
Sokołowski, A. W. 3457
Solar, F. 3916
Solbraa, K. 3769
Soles, R. L. see Gorhold, H. D.
Solheim, W. G., et al. 2568
Solik, J., and Antończyk, S. 4429
Soljanik, I. 2190
Solov'ev, B. A. 4345
Solov'ev, P. E. 5000
Solov'ev, S. A., and Andreev, V. V. 4346
Solov'ev, V. A. 5844
Solymos, R. 610, 6150
Somberg, S. I. see David B., E.,
Somes, H. A. see Little, S.
Son, D. S., and Cho, R. M. 463
Soni, R. C. 5429
Sonnoli, A. 524
Soon, T. G. see Hong, W. K.
Soos, J. 543
Sopko, R. 3093, 4736
— see Jurášek, L.
Sopp, L. 6090, 6092
Sopper, W. E. 61
— and Lull, H. W. 1791
— see Kline, G. N.
— see Sagmuller, C. J.
— see Shindel, H. L.
Sorensen, F. 148
Sorsa, B. 1431, 6560
Sosnin, A. E. 4823
Sosnin, M. I. 4815
Sosnina, A. A., Čudinov, B. S., and Kuprienko, L. I. 4709
Sotikova, L. G. see Sobolev, I. V.
Sougnez, N. 3625
Sousa, A. [de F.] Gomes e 1911
Southwood, T. R. E. 5052
Sowade see Mantel, K.
Soykan, B. 4328
Sozykin, N. F. 4985
Spahlinger 4425
Špakova, V. M. see Tkačenko, G. V.
Spalt, H. A., and Sutton, R. F. 6725
Specht, R. L. see Parsons, R. F.
Specht-Jürgensen, I. 127-8
Speck, N. H. 5398
Speer, J., Kroth, W., and Bartelheimer, P. 2837
Speidel, G. 1178, 2836, 6172
Speidel, G. —continued
— and Steinlin, H. 6172
Spencer, J. S., Jr. see Wilson, A. K.
Spencer, P. F. 6174
Spengler, O. A. 58
Spiecker, M. 1092
Spierings, F. 2436
Spiranec, M. 2140
Splechtna, K. 5736
Springfield, H. W. see Riffle, J. W.
Sprogis, A. É. 2733
Spurr, S. H. 5233
Spyridakis, D. E. see Wilde, S. A.
Squillace, A. E. 3731, 5158
— and Harrington, T. A. 5659
— see Bengtson, G. W.
— see Varnell, R. J.
Squire, G. B., Swan, E. P., and Wilson, J. W. 4588
Srivastava, B. P. 5444
Šrivastava, P. B. L. 1822, 2134
— see Kaul, O. N.
Środoń, A. 5152, 5243
Stacknik, E. 5152
Stackelberg, S. von 702, 742, 3956, 5674
Staeva, L., et al. 2859
Stage, A. R. 1118, 2743
Stahiev, Ju. M. 3003
Stahl, W. 506, 2543
Stairs, G. R. 968
— and Jeffers, R. M. 775
Stajčenko, N. I. see Fedorov, N. I.
Stajniak, J. 2380
Stal'skaja, P. V., and Usova, D. A. 2128
Stambaugh, W. J. see Cordell, C. E.
Stambaugh, W. J. see Towers, B.
Stamenkov, M. see Nicota, B.
Stamenković, V. see Todorović, D.
Stamm, A. J. 1207, 1289-90, 3072
Stamnes, P. 4441
Stanek, W. 5305-6
Stanek, W. K. L. 2757
Stănescu, V. 3512, 3630
Stanev, M. C. 939
Stanković, D. see Jovanović, B.
Stanley-Harris, G. see Church, J. A.
Stanley, R. G. 1871, 3236
Starčenko, I. I. 5455
Starfinger, K. see Becker, G.
Starkey, R. L. see Benoit, R. E.
Starr, J. W. see Miller, W. F.
Starzecki, W. 143
Staszkiewicz, J. 5152
Statkov, N., Asparuhov, K., and Popov, C 572
— et al. 664
Staub, R. 3444
Staud, V., Dressler, M., and Švenda, A. 2400
Stawecka, W. see Hejmanowski, S.
Stawiński, K., and Surmacz, W. 924
Stearn, W. T. 5231
Stecki, Z. 461
Steel, R. P. 1754
Steele, R. C. 2077, 5237
Steele, R. W., and Pierce, W. R. 5436
Steenis, C. G. G. J. van 1947
— and Balgooy, M. M. J. van 1948
Steensen, D. H. J. 2856
Štefan, K., and Lippay, H. 2503
Štefančík, L. 6071
Stefanov, B., and Garelkov, D. 6140
— and Najdenova, C. 256

Stefanović, V., and Manuševa, L. 5368
Stefanovski, V. 2928
Stefansson, E., and Sinko, M. 2167
Steffan, J. R. 6002
Stegall, W. A., Jr. see Powers, H. R.
Stegmann, G., and Bismarck, C. von 1597, 6718
— Bismarck, C. von, and May, H. A. 4676
— and May, H. A. 4816
— and Schorning, P. 3077
— Schorning, P., and Kratz, W. 4814
Stehr, G. W. 1800
— see Harvey, G. T.
Stein, J. D. 6047
Stein, W. I. 485, 498
Steinbach, J. 5726
Steinbeck, K., May, J. J., and McCreery, R. A. 511
— and Porterfield, E. J. 528
Steiner, J. see Hoffmann, G.
Steinhübel, G. 247, 771-3
Steinlin, H. 3928, 4332, 6172
— and Grammel, R. 3928
— see Speidel, G.
Ştelian, M. see Popescu, I.
Steller, S. 1428, 4678
Stellingwerf, D. A. see Boon, D. A.
Stel'mahov, G. K. 4039
Stempień, C. see Raczkowski, J.
Stenmark, A. 5913
Stepanov, I. S., Vorob'eva, È. S., and Uvarova, L. S. 4996
Stepanov, V. I. see Čudinov, B. S.
Stephan, G. 652, 2907, 3912, 5401
Stephansen, K. see Jensen, A.
Stephen, A. M. see Kaplan, M.
Stephens, G. R. 5103
Stepin, V. V. see Borodin, A. M.
Šterenberg, L. È. see Dinesman, L. G.
Sterlin, D. M., Kucakova, V. E., and Lejkin, A. Z. 4775
Stern, E. G. 4632, 6435
— and Pletta, D. H. 6526
Stern, K. 5146
Stern, R. 4898
Sternitzke, H. S. 6797
Sterrett, J. P. 308, 629
Steubing, L. 765
Stevens, R. R. see Suchsland, O.
Stevenson, D. D. 1157
Stevenson, R. E. 1002
Steward, F. C. see Durzan, D. J.
Steyaert, R. 5200
Stieda, C. K. A. 6357, 6523
Stiell, W. M. 2711, 6012
— and Berry, A. B. 2781
Stindl, G. 4935
Stipes, R. J., and Schreiber, L. R. 859
— see Schreiber, L. R.
Stiteler, W. M., Jr., and Shaw, S. P. 898
Stluka, R. T. see Kampe, R. C.
Stoakley, J. T. 1060
Stoeckeler, J. H. 2201, 2215, 2418
Stoffels, A. see Vries, P. G. de
Stogov, B. N. see Sulimov, A. N.
Stojanov, R. see Filipov, G.
Stojanov, Ỹ., and Koev, D. 4830
Stojanov, Z., and Leštarski, H. 3362
Stojanović, O. 6177
Stokes, C. M., and Richardson, B. Y. 5645
Stokes, J. G. 1394
Stolařík, R., et al. 5742
Stoll, G. P. see MacConnell, W. P.
Stone, D. E., and Freeman, J. L. 3486
Stone, E. C. 1684, 2221
— and Vasey, R. B. 6810
Stone, E. L., and Cornwell, S. M. 5323
— see Will, G. M.
Stone, G. I. 2618
Stone, J. E., and Scallan, A. M. 2937
Stone, O. P. 2296
Stonecypher, R. W. 5158
Stoneman, D. L. 3543
Storch, K. 4716
Storey, T. G., and Cooley, L. W., Jr. 4045
Storm, G. L., and Halvorson, C. H. 2582
Story, R. 383, 3579
Stoszek, K. J., and Rudinsky, J. A. 1032
Stott, C. B. see Meteer, J. W.
Stott, K. G. 658
Stout, B. B. 4330
Straatmans, W. 5190
Stracey, P. D. 5722
Strand, H. 4918
Strand, L. 2769-70, 4306, 6100-1
Stransky, J. J., and Halls, L. K. 1810
— and Wilson, D. R. 3532
Straub, R. see Zeidler, H.
Strehlke, B. 1710, 5674, 6172
Strickler, M. D. 3019, 6316
Stridsberg, E., and Algvere, K. V. 2837
Striganova, B. R. 49, 3305
Strobel, O. 1554
Stroempl, G. 484
Strokov, V. V. 5054
Strømnes, R. see Samset, I.
— see Segebaden, G. von
Strothmann, R. O. 302
Struha, K. see Bradáč, V.
Strzelec, Z. see Królikowski, L.
Strzygowski, W. 3207
Stuart Smith, A. M. 2150
Stubbs, J. see Hook, D. D.
Stubbs, J. H. 1482
Sturgeon, W. J. see Dobie, J.
Styles, J. H. 5017
Subramanian, G. B. V. see Madhav, R.
Suchsland, O., and Stevens, R. R. 6462
Sucoff, E., Ratsch, H., and Hook, D. D. 1562
Sucoff, E. I., and Allison, J. H. 5791
Sudačkov, E. Ja., and Vital'ev, A. P. 1169
Sudačkova, N. E., Rastorgueva, E. Ja., and Kolovskij, R. A. 3364
Sudarev, A. R. see Kulagin, V. P.
Sudarev, V. G. 6186
Suddarth, S. K., and Goodrick, F. E. 1442
— and Reardon, G. F. 3050
— see Senft, J. F.
Sudiono, J., and Ardikusumah, R. I. 3705
Sudo, S., et al. 1359
Sugano, M., et al. 6261
— see Nishihara, M.
Sugawa, T. 1246, 6261
Sugaya, S. see Kimura, C.
Sugden, E. A. N. 4795
Sugihara, H. see Fujii, Y.
Sugiyama, H. 4563
Sukachev [Sukačev], V. [N.], and Dylis, N. [V.] 5335
Sukh Dev see Nagasampagi, B. A.
Sul'c, G. È. 2066
Sulc, V. 4482
Şulea, N. see Vâclea, V.
Şulepov, I. A. 6477
Şul'gin, V. A. 653
Šulíková, Z. see Ekberg, I.
— see Eriksson, G.
Sulimov, A. N., and Stogov, B. N. 690
Sulland, A. 6233
Sullivan, C. R. 3402
Sullivan, J. D. 1263-4
Šumakov, V. S. 5285, 5302
Sundahl, W. E. see McDonald, P. M.
Sundar, S. S. 2146
— and Sharma, Y. M. L. 2350
Sundelin, A. 2855
Sundheimer, P. W. 411
Sunder, E. 3737
Surmač, G. P. 6781
Surmacz, W. see Stawiński, K.
Surmiński, J. see Cybulko, T.
Surodejkin, N. N. 3108
Surova, T. G. 3395
Sus, N. I., and Serebrjakov, F. I. 637
Suskin, Ju. A. see Verenčikov, P. I.
Susmel, L. 66, 2041
Süss, H. 6295
Süssman, A. S. see Ainsworth, F. C.
Suszka, B. 494, 1834
Sutherland, J. R. 1070, 3752, 6060, 6062
— and Fortin, J. A. 6064
Šutilov, V. A. 5174
Sutton, R. F. 2485, 3821, 5565
— see Spalt, H. A.
Suvorov, P. A. 4111, 5843
Suvorov, V. I. 5570
Suwara, E. see Trampler, T.
Suzuki, I. 1615
Suzuki, S. 1919
Suzuki, T. see Kitahara, K.
Švalbe, K. P. see Ozolina, I. O.
Švalov, N. N. 1112
Švarcman, G. M. 6714
Švecov, Ja. N. see Ostrovskij, M. P.
Švencickij, G. V. see Lin'kov, I. M.
Švenda, A. 5401
— see Staud, V.
Svendsrud, A. 2836
Svikle, D. Ja. see Kalnin'š, A. I.
Šviridov, A. S. 580
Švyrev, F. A. 1374
Swabey, C. 3216, 4936
Swain, K. M., and Wickman, B. E. 6001
Swan, E. P. 1333, 6384
— see Squire, G. B.
Swan, F. R., Jr. 3580
Swan, J. M. A. 5392
Swann, G. W. see Kennedy, R. W.
Swanson, R. H. 1836
Swanston, D. N. see Patric, J. H.
Sweaney, W. P., Clark, G. M., and Bunting, W. R. 3402
Swett, C. E. see McConkey, T. W.
Swift, L. W., and Holloway, C. W. 3336
Swindel, B. F. see Hart, C. A.
Swinford, K. R. 6074
Switzer, G. L., and Nelson, L. E. 2203
— see Nelson, L. E.
Sykes, W. R., and Godley, E. J. 5246
Syrovátka, K. see Kříž, M.

Szabó, I., et al. 50
Szabó, K. 6503
Szappanos, A. 3673, 3808
— and Tanka, S. 4526
Szász, E. 2507
Szász, T. 2368
— see Huszár, E.
Szczepański, H., and Tzankow [Cankov], G. 987
Szczerbakow, K. 2343
Szendrey, I. 1844
— and Csanády, E. 3266
Szepesi, L. 5685
Szodfridt, I. 5404
Szontagh, P. 5404, 5950
Szostak, M. 2395, 6468
— and Bąkowski, S. 4652
Szturma, L., and Woltyńska, H. 4688
Szujecki, A. 1774
Szymczak, M. see Oniśko, W.
Szymkiewicz, B., Kucaba, S., and Tumiłowicz, J. 3531

Tabat[ab]ai [, M.], Terver, and Boullanger 4485
Tabb, C. B. see Palmer, E. R.
Tack, G. W. 1467
Tackle, D. see Alexander, R. R.
Tadaki, Y. 5327
— Hatiya, K., and Miyauchi, H. 3600
— and Kagawa, T. 5003
— Ogata, N., and Nagatomo, Y. 326
Tajima, T. 4605
Takacs, E. A. 5287
Takagi, J. 1492
Takahashi, A., and Sakurai, T. 6520
— see Sakurai, T.
Takahashi, L. 4643
Takahashi, M., and Nishimoto, K. 3092, 6596
Takahashi, T. 1286, 2941
— see Imamura, H.
Takahashi, Y. 6416
Takase, G. 6087
Takata, K. 2698
Takayama, Y. 2177
Takeda, S. 1789
Takei, A. see Yamamoto, A.
Takemura, T. 1309
Talerico, R. L., McComb, C. W., and Garrett, W. T. 2619
Talli, A. R. 508
Tallós, P. 983, 2601
Tamari , C. 2220
Tamás, J. 6663
Tamblyn, N., Colwell, S. J., and Vickers, G. N. 6556
Tamm, C. O. 3292, 3859
— and Holmen, H. 3272
— et al. 2741
Tamm, G. J. see Icekson, A. F.
Tamm, Ü. see Margus, M.
Tamolang, F. N., Wangaard, F. F., and Kellogg, R. M. 6676
Tamura, F. see Kawamura, Y.
Tan, P.-C see Chun, W.-Y.
Tanaka, A., and Kamitani, M. 6461
Tănăsescu, S. 416
— and Andrei, S. 578
Taneja, K. see Puri, Y. N.
Tang, C. S. see Findlay, J. A.
— see Macdonald, D. R.
Tang, W. K., and Eickner, H. W. 4715
Tanghe, M. see Froment, A.
Tank, T. 4806
Tanka, S. see Szappanos, A.
Tanno, K. 6056
Tappeiner, J. C., II 2127
Tarankov, V. I. 5375
Tarankova, T. I. 5375
Taras, M. 1277
— and Saucier, J. R. 2956
Tarasenko, I. 2626
Tarbinskij, Ju. S., Pèk, L. V., and Ibraimova, K. I. 2603
Tardif, Y. see Miller, D. G.
Tarján, L. 587, 798
Tarkow, H., and Feist, W. C. 6405
— see Feist, W. C.
— see Weatherwax, R. C.
Tarociński, E. 1550
Tarrant, R. F., and Norris, L. A. 5797
Tasić, R. 4031
Tate, N. L., and Bedard, W. D. 4257
Taurin'š, Ja. K. see Matuzanis, Ja. K.
Tavşanoğlu, F. 3994
Taylor, B. W. see Saunders, J. C.
Taylor, C. J. 6213
Taylor, D. A. H. see Adesida, G. A.
— see Adesogan, E. K.
— see Eshiett, I. T.
Taylor, D. R. see Chan, W. R.
Taylor, F. W. 6337
Taylor, G. D. 4916
— see James, G. A.
Taylor, J. C., Lloyd, H. G., and Shillito, J. F. 5912
Taylor, J. M. 6561
— see Baker, J. M.
Taylor, K. L. 4276, 6043
Taylor, L. D. see Basham, J. T.
Taylor, R. J., Jr. 3643
Taylor, R. L. see Harshbarger, J. C.
Taylor, W. C. see Diment, J. A.
Tcheng, T. H. see Liittschwager, J. M.
Teich, A. H. 5170
Temmlová, B. see Bozděch, J.
— see Červinková, H.
— see Jančařík, V.
Templado, J. 2622
Templeton, B. C. 206
Tengnér, J. 5207
Ten'kovceva, É. S. 3439
Tennant, J. R. 3460
Teotia, T. P. S. see Majumdar, N.
Tepper, H. B. 119, 5129
— and Hollis, C. A. 131
— Wilcox, H. E., and Valentine, F. A. 6155
Terashima, N. see Bolker, H. I.
Terazawa, S. 6261
— and Sato, S. 6261
Terehov, F. I., and Frolov, Ju. A. 2345
Terent'eva, G. Ja. see Dem'janovskij, K. I.
Tereznykova, E. M. 938
Ternovskaja, R. B. see Tokareva, T. E.
Terriere, L. C. 3324
Terui, K. see Okuma, M.
Terver see Tabatabai, M.
Terzić, D. 6761
Tesařová, M., and Schánĕl, L. 6606
Tesche, M. 4087
Teske, W. see Patscheke, G.
Tewari, K. K. see Prakash, S.
Tewari, M. C., Mitra, S. N., and Sharma, M. N. 3062
Thakur, M. L. see Chatterjee, P. N.
Thalenhorst, W. 2577, 4173
— see Schröder, J.
Thanikaimoni, G. 3396
— and Jayaweera, D. M. A. 3396
Thapa, R. S. see Prashad, B.
— see Roonwal, M. L.
Thaper, H. S. see Bakshi, B. K.
Thas, J. 2194, 3200
Thatcher, R. C. 1049
— and Pickard, L. S. 1012
Theile, J. 4213
Theodorou, C. 5525
— see Bowen, G. D.
Therianos, A. D. 63
Thielges, B. A. see Mergen, F.
Thieme, H. 4840
— and Richter, R. 3357, 4841
Thom, B. G. 375
Thomas, A. V. 2867
Thomas, B. R. see Enzell, C. R.
Thomas, D. B., and Pratt, D. J. 3902
Thomas, J. B. 5050
Thomas, P. H. 2452
Thomas, R. J., and Nicholas, D. D. 6278
— see Hart, C. A.
— see Nicholas, D. D.
Thomas, W. A. 3278
Thomas, W. A., Jr. 5284
Thompson, C. G. see Carolin, V. M.
Thompson, D. F. see Graber, R. E.
Thompson, H. E. 4200
Thompson, J. F. 100
Thompson, N. S., and Hankey, J. D. 6290
— Kremers, R. E., and Kaustinen, O. A. 6379-80
Thompson, S. O. see Whatley, B. T.
Thomson, J. see Morgan, J. W. W.
Thomson, R. H. see Burnett, A. R.
Thomson, W. W. see Berry, W. L.
Thor, E. 453
Thorsteinsson, L., and Ólafsson, G. 2331
Thothathri, K. 3487
Throckmorton, L. H. 3324
Thulasy, K. S. see Shah, J. J.
Thümmler, K. 3712
Thunell, B. 1207, 1378, 4468, 6423-4
— and Wallin, G. 1379
Tigner, J. R. see Dietz, D. R.
Tihomirova, L. G. 1776
Tihonravov, N. A. 472
Tiihonen, P. 1673, 2760, 6789
Tilev, G. see Velkov, D.
Timell, T. E. 1327
— see Côté, W. A., Jr.
— see Simson, B. W.
— see Zinbo, M.
Timmermans, J. 4239
Timofeev, A. F., and Lesnov, P. A. 3836
Timofeev, V. P. 6781
Timonin, M. I. 5020
Tinsley, T. W. see Biddle, P. G.
— see Longworth, J. F.
Tinson, E. J. F. see Richards, E. G.
Tinto, J. C. 2857, 2944, 4692
— see Riqué, T.
Tiščenko, D. V., Cvetaeva, E. M., and Toporkova, G. V. 6737
Tissot, M. 6682
— see Petroff, G.

Titov, E. V. 395
Titovšek, J. 5914
Tiwari, K. M. 5479
Tiwari, S. D. N. 4448, 4931
Tkačenko, A. A. 740
Tkačenko, G. V., Špakova, V. M., and Sokolova, N. I. 432
Tloczek, I. 3181
Toburdanovskij, A. N. 5662
Tocan, M. see Iancu, A.
Tochigi, T. see Hayashi, D.
Toda, R., and Sato, T. 3754
Todorović, D., and Stamenković, V. 6091
Todorovski, S. 2908
— see Pejoski, B.
Togashi, I. see Keino, K.
Toit, J. W. du see Papendorf, M. C.
Tokareva, T. E., and Ternovskaja, R. B. 667
Tokmanoğlu, T. 4406
Toko, E. V., et al. 2539
Tölle, H. 3568
Tollinger, V. 6207
Tomassone, R. 3245
— see Lacaze, J. F.
Tomaszewski, M. 1834
Tomčuk, R. I., and Tomčuk, G. N. 1635
Tomek, A. 3145
— et al. 6400
Tomescu, A., et al. 2065
Tominaga, H. see Horioka, K.
Tomita, K. see Sakai, K.-I.
Tomita, M. and Kozuka, M. 4837
Tomko, J., et al. 6757
Tomlinson, P. B., and Zimmermann, M. H. 2882
— see Zimmermann, M. H.
Tompa, K. 1898
Toole, E. R. 4118, 4153, 5850
— and Krinard, R. M. 891
Topkasov, A. V. 318
Toporkova, G. V. see Tiščenko, D. V.
Toral Chacón, J. see Caballero Deloya, M.
Torgersen, H. F. see Jayme, G.
Torgersen, T. R., and Baker, B. H. 4225
Torgonskij, M. N., Krotov, V. R., and Bratin, V. S. 737
Toropogrickij, D. P. 3724
Torres Juan, J. 1483, 5819
Torrie, J. H., see Kowlowski, T. T.
Tortorelli, L. A. 3191, 4882, 6811
Tošić, M. 5183
Tóth, B. 5404
Tóth, I. 397
Touliatos, P. 5045
Tovjanskas, T. B. 2800
Towers, B., and Stambaugh, W. J. 5838
Toyoshima, J. 5530
Tracey, J. G. see Webb, L. J.
Traci, C., et al. 3798
Trampler, T. 6176
— and Dobrzańska, J. 2821
— and Suwara, E. 2809
Tranina, N. F., and Veresova, I. M. 1461
Tranquillini, W. 102, 286
— and Unterholzner, R. 3519, 5581
Trappe, J. M. 288, 1980
— see Krueger, K. W.
Trautmann, W. L., and Iyer, J. G. 2206
— see Iyer, J. G.
Travers, W. W. G. 2853
Travleev, A. P. see Reinhard, L. V.
Trefilov, P. S. see Dročnev, Ja. G.
Tregubov, V. 2114
Treshow, M., Anderson, F. K., and Harner, F. 770
Triaca, M. see Guillemonat, A.
Trillmich, H. D. 5619
Trimble, G. R. Jr. 6137
— and Tryon, E. H. 5310
— see Marty, R.
Tripathi, P. P. see Prakash, U.
Troedsson, T. 673
Trommer, R. 1101
Tromp, H. 6172
— and Bittig, B. 4854
— and Schwotzer, W. 2837
Tromp, P. H. M. see Bol, M.
Tronco, G. 3822
Trošanin, P. G. 1043
Trotzig, K. G. 1196
Troughton, G. E. 6452-3
Trousdell, K. B., and Langdon, O. G. 3672
Troxell, H. E., and Mueller, L. A. 6640
— et al. 4558
— see Bodig, J.
True, R. P. see Amos, R. E.
— see Cones, W. L.
— see Ginns, J. H.
— see Sutherland, J. R.
Trusewicz, A. 6447
Tryon, E. H. see Kulow, D. L.
— see Trimble, G. R., Jr.
Tsalev [Calev], M. 5944
Tschesche, R., Last, H., and Fehlhaber, H.-W. 4839
— et al. 4838
Tsitsonis [Tsitsōnēs], K. see Geōrgopoulos, A.
Tsoumis, G. see White, P. R.
Tsubota, Y. see Ota, M.
Tsuchiya, K. see Kitahara, K.
Tsujita, A. see Nakajima, Y.
Tsuji, T., Watanabe, S., and Ishii, K. 3942
— see Ishii, K.
— see Watanabe, S.
Tsukada, M. 5339
Tsuru, S. 50
Tsutsumi, T., Kawahara, T., and Shidei T. 5064
Tsutsumoto, T. 6261
Tubb, D. J., et al. 4082
Tucker, R. E., and Jarvis, J. M. 4051
Tucović, A., and Jovanović, M. 5120
— and Nikolić, Đ. 5772
— see Jovanović, B.
Tudor, E. see Alexandru, S.
Tudosoiu, P., et al. 5573
Tuil, H. D. W. van 1815
Tumiłowicz, J. 3687
— see Szymkiewicz, B.
Turček, F. 72
Tureckaja, R. H. see Kefeli, V. I.
Turnbull, A. R. see Dale, W. L.
Turnbull, K. J. 2782
Turner, B. J. 4330
Turner, B. L. see Rudloff, E. von
Turner, H. 6803
Turner, R. D. 4742
Turrell, F. M., et al. 2932
Tuskó, L. 1867, 2179
Tustin, J. R. 6174, 6245
Tutunaru, V. see Georgescu, C. C.
Tüxen, R. see Jahn, H.
Tveite, B. 4302
Tverdynina, M. M. 4621
Tvermyr, S. 4181
Twarowska, I. 2513
Twisselmann, E. C. 5204
Tzankow [Cankov], G. see Szczepański, H.
Tzschacksch, O. 3372

Ueckermann, E. 3204
Ugawa, N. see Iwashita, M.
Ugolev, B. N., and Lapšin, Ju. G. 1287
Ugolov, B. N. 1555
Uidl, N. 6649
Újvári, F., and Vlaszaty, Ö. 798, 5802
Ul'berg, R. F. 1402
Ullevålseter, R. O. 1545, 4704
Ullrey, D. E., et al. 1812, 5060
Unger, H. 3295
Unligil, H. H. 6601
Untaru, E. see Bogdan, N.
Unterholzner, R. see Pisek, A.
— see Tranquillini, W.
Upadhaya, L. P. see Kedharnath, S.
Uprichard, J. M. 6697
Urakami, H. see Sadoh, T.
Urban, S. 4228, 5754
Ürgenç, S. 3730
Urmanov, U. see Gankov, B.
Urošević, B. 2547
Ursic, S. J. 5045
— and Popham, T. W. 1787
Usanov, Ju. N. see Ajzenberg, A. I.
Uskov, S. 405
Uškova, E. V., and Korotov, S. Ja. 1620
Usova, D. A. see Stal'skaja, P. V.
Uspenskij, E. I. 298
— see Rahov, V. A.
Utkin, A. I. 3599
Utkina, E. A. see Kozlov, V. N.
Utleg, J. L. 6243
— see Cosico, A. B.
Uvarova, L. S. see Stepanov, I. S.
U(y)emura, T., Isaka, S., and Saito, H. 736

Vaarama, A., and Valanne, T. 3430
Vaartaja, O. 507, 828, 1028
— and Agnihorti, V. P. 1772
— and Bumbieris, M. 5825
— see Agnihorti, V. P.
Văcaru, G. see Săvulescu, A.
Vacková, M. see Hofman, J.
Václea, V., and Sulea, N. 719
Väčovski, H. 400
Vaden, J. H. 59
Vadim, L. 2080
Väisänen, U. 2832, 2840
Vajčis, M. V. 3308
Vajnštejn, A. I. see Gejdeman, T. S.
Vakurov, A. D. 3187
— and Popov, V. V. 3187
Valanne, T. see Vaarama, A.
Vălčev, V., and Hristov, C. 2859
— see Hristov, V.
— see Kristensen, P. K.

Valendik, E. N. 781
Valentine, E. W. 5922
Valentine, F. A. see Tepper, H. B.
Valenziano, S., and Scaramuzzi, G. 4381
Valenzuela Rosales, H. 4959
Valiunas, A. J. see Wuenscher, J. E.
Valk, U. 5612
— and Paluvits, A. 505
— see Ilves, E.
Val'kov, Ju. I. 2412
Válková, O. 521
Vámos, R., Vida, L., and Csósz, J. 830
Van, S. H., and Gallagher, D. G. 5698
Vaněk, J. 49
Vanesse, R. 1608, 3736
VanHaverbeke, D. F. 5208
— and Boldt, C. E. 5652
Vanin, A. F. see Četverikov, A. G.
Van'kov, P. I. see Klar, G. V.
Váradi, J. see Jurášek, L.
Varaksina, T. N., Hol'kin, Ju. I., and Baženov, V. A. 1217
Varga, F. 4220
Varga, Š., et al. 4714
Varley, G. C., and Gradwell, G. R. 5986
Varnell, R. J., and Romberger, J. A. 137
— Squillace, A. E., and Bengtson, G. W. 171
Vartapetjan, B. B. see Badanova, K. A.
Varty, I. W. 925
Vasek, F. C., and Scora, R. W. 3175
Vasey, R. B. see Stone, E. C.
Vashist, V. N., see Kapur, K. K.
Vasić, K. 6046
Vasić, M. 4008
Vašíček, F. see Jurča, J.
Vasil'ev, B. R. 5134
Vasil'ev, G. I. see Bukštynov, A. D.
Vasil'ev, P. V. 6781
Vasilev, T. see Dončev, G.
Vasil'eva, L. N., and Nazarova, M. M. 5375
Vasilić, V. 3871
Vasjukov, V. A. see Demin, K. A.
Vassal, J. 5135
Vaughan, C. L. see Pronin, D.
Vaughan, G. A., and Grant, D. W. 3055
Vaughan, G. N. see Rovelli, B.
Vavilov, E. I. see Berezin, A. M.
Vavilov, P. P. see Verhovskaja, I. N.
Vaz, A. L. Castelão, and Silva, J. M. de Azevedo e 2591
Vazquez Soto, J. 6171
Ved', I. P. 5035
Vedernikov, N. M. 5828
Veiga, A. de Arruda 618
Vekšegonov, V. Ja. 2330
Vela G., L., and Hernandez S., R. 5539
Velasco, F. 3284
Velasco Fernandez, L. see Marcos de Lanuza, J.
Velašević, V. 5650
Veldkamp, J. F. 5230
Veldmann, G. see Hoffmann, G.
Velkov, D. 486
— Ploštakova, L., and Tilev, G. 3585
Veloso, H. P. 3645
Vencenosceva, M. A. 1104
Venet, J. 3653, 5633
Venkatamaran, K. see Karanjgaokar, C. G.
Venkataramanan, S. V. 2920
Venkatesh, C. S., and Arya, R. S. 2242
Venkateshwarlu, V. see Murty, V. K.
Venn, L. 2257
Ventura, A., Berengut, G., and Victor, M. A. Moraes 32
Verdcourt, B. 1928, 3460
Verenčikov, P. I., Pronevič, V. P., and Suskin, Ju. A. 2413
Veresova, I. M. see Tranina, N. F.
Verhovskaja, I. N., Vavilov, P. P., and Maslov, V. I. 83
Verhunov, V. M. 1079
Verling, P. 2171
Veronneau, G., and Juillet, J. 4281
Verrall, A. F. 6609
Veršinin, V. I. see Nartov, P. S.
Versteegh, C. see Braun, H. J.
Verstraeten, C. 942
Vesecký, J. see Dimitrovský, K.
Vestjordet, E. 4313
Větvička, V. 259
Vezev, L., Nikolov, V., and Mandev, A. 5041
Vezina, P. E., and Paille, G. 323
Viart, M. see Labroue, L.
Vick, C. B. 6636
— Gaby, L. I., and Baechler, R. H. 4702
Vickers, G. N. see Tamblyn, N.
Victor, M. A. Moraes, and Filho, O. A. Gurgel 443
— see Ventura, A.
Victorin, G. 1276
Vicze, E. 6007
Vida, L. see Vámos, R.
Vidaković, M. 1879
— and Siddiqui, K. M. 5177
— see Djurbabić, B.
Vidal, J. E. 3517, 5384
Vidali, E. 5515
Videla Pilasi, E. O. 3829
Vieira, V. 3704
Vieitez, E. 179
— and Peña, J. 5546
— et al. 3384, 5113
Vihrov, V. E., and Paul', É. É. 6569
— et al. 4417
Vik, T. 6100
Vila, W. Málaga 994
Világhy, G. see Papp, G.
Vilarov, L. M. 30
Vilcsek, J. 5685
Viljacer, M. G. 5482
Villa, W. 4667
Villegas V., A. see Córdoba G., J. R.
Villière, A. 4753, 6571
Vincent, A. B., and Haavisto, V. F. 4289
Vincent, G. 5235
Vines, R. G. see Cromer, R. N.
Viney, R. 6773
Vinkler, V. 1008
Vinogorov, G. K. 5697
Vinokurov, M. A., and Mironov, N. A. 276
Vinš, B. 2166
— and Ludera, J. 766
Vintilă, E. 1480
— et al. 6562
Vipper, P. B. 5338
Viro, P. J. 2279, 3860
Vişan, D. see Pîrvescu, D.
Vishnu-Mittre, Gupta, H. P., and Robert, R. 3613
Višnjakova, T. N. 2899
— see Jaroslavcev, G. D.
Višnjakova, Z. V. 911
Visser, J. H. 4480
Visser, S. A. see Banage, W. B.
Vital'ev, A. P. see Sudačkov, E. Ja.
Vité, J. P. 2916
— and Pitman, G. B. 2655, 6017
Vítrová, B. 114
Vivekanandan, K. 1299
Vlasev, V. see Penev, N.
Vlasov, G. D. 3035
Vlaszaty, O. see Újvári, F.
Vlk, S. 6189
Voce, B. 2198
Vodneva, A. N. see Manakov, V. A.
Vodop'janova, T. D., and Grišankov, G. E. 243
Vogenberger, R. A., Olson, E. F., and Corpening, B. H. 786
Vogl, M. see Börtitz, S.
Vojčal', P. I. 1766
Volck, H. E. 3657
Volgmann, W. 6214
Volk, K. 399, 5756
Volkert, E., and Racz, J. 750
Volkov, A. D. 404
— and Zjabčenko, S. S. 2032
Volkov, V. D. 1738, 4390
Volkov, V. N. 5375
— and Vorošilov, V. P. 5375
Volkovič, V. B. 2050
Vologdin, A. I. see Haruk, E. V.
Vorob'eva, È. S. see Stepanov, I. S.
Voročihin, N. Z. 2338
Voroncov, A. I. 4174
Voropanov, P. V. 1130
Vorošilov, V. P. see Volkov, V. N.
Vorreiter, L. 1229, 2894
Voûte, A. D. see Linde, R. J. van der
Vožzo, J. A. see Hacskaylo, E.
Vrdoljak, Z. 3760
Vredenburch, C. L. H. van, and Laar, G. 1875
Vries, J. de 4437
Vries, P. G. de, and Stoffels, A. 2695
Vtorova, V. F. see Baranov, A. I.
Vu, A. V. see Galaktionov, I. I.
Vujić, P. 4154
Vujičić, L. 6834
Vuokila, Y. 6163
— and Laasasenaho, J. 4307
Vyas, L. N. 2090-1
Vygodskaja, N. N., and Zukert, N. V. 1972
Vyplel, K. 663
Vyskot, M. 2163

Wachendorff, R. see Günther, R.
Wachtmeister, H., and Åstrand, H. 6806
Wacker, H. 3012
Wackerman, A. E., Hagenstein, W. D., and Michell, A. S. 2355
Waddell, C. D. see Wilson, L. F.
Waelti, H. 1155
Wagar, J. A. 3200
Wagenbreth, D. 5896
Wagener, W. W. 5889
Wagenführ, R. 1215-6, 4500, 4502, 6263
Wagenknecht, E. 6850
— and Achterberg, W. 634
Wagg, J. W. B. 5294
Waggener, T. R. 2817

Wagner, C. E. van 2455-6, 5780, 5783
Wagner, J. see Zak, J. M.
Wagner, W. 335
Wahlberg, I. see Enzell, C. R.
Waisel, Y., and Liphschitz, N. 6157
— Liphschitz, N., and Arzee, T. 1255
— see Arzee, T.
— see Liphschitz, N.
Wajszczuk, S. 3158
Wakeley, P. C. see Snyder, E. B.
Walbridge, T. A., Jr. 5705, 5715
Walden, C. C., and Allen, I. V. F. 6496
Waldron, R. M. 408
— and Cayford, J. H. 495
— see Cayford, J. H.
Walendzik, R. J. 2204
Walker, N. 4375
Walker, N. M. see Jewell, F. F.
Walker, N. R. 2270
Walkinshaw, C. H. 5875
Wallergraber 709
Walles, B. 5155
Walley, G. S. 956
Wallin, G. see Thunell, B.
Walper, S. see Dubin, H. J.
Walser, D. C. see Hailey, J. R. T.
Walter, R. 6217
Walters, J. see Smith, J. H. G.
Walters, S. M. 5237
Wambach, R. F. 5578
— see Schweitzer, D. L.
Wandt, H., and Grummer, H. J. 577
Wang, B. S. P. see Maini, J. S.
Wang, C. -W. 166
Wang, H., and Ch'en, C. 1242
— and Chu, A. C. [Chou, Y. -C.] 2895
Wang, T. C. see Yang, J. -C.
Wangaard, F. F., and Granados, L. A. 4551
— Woodson, G. E., and Murray, M. R. 6516
— see Tamolang, F. N.
Ward, D. B. 244, 1951
Ward, F. R. see Dell, J. D.
Ward, H. S. see Radwan, M. A.
Ward, W. W. see Lewis, R. A.
— see Wiant, M. K., Jr.
Wardle, J. 380
Wardle, P. 230, 2075
Wardle, P. A. 565, 2835, 4442, 6174
— see Grevatt, J. G.
Wardle, T. M. 3047, 6444
Ware, K. D. 6074
Warecki, W. see Ilmurzyński, E.
Wareing, P. F. 5107
— see Causton, D. R.
— see Digby, J.
Waring, R. H., and Cleary, B. D. 1857
Watanabe, H. 1773
— et al. 1265
— see Hukuhara, T.
Watanabe, K. see Higuchi, T.
Watanabe, M., Nakai, I., and Fujimoto, H. 2230
Watanabe, S., Ishii, K., and Tsuji, T. 3943
— see Ishii, K.
— see Tsuji, T.
Waters, D. 633
Watson, A. J. see Phillips, F. H.
Watson, J. A. see Reid, R. W.
Watson, R. W. see Bird, F.
— see Coupe, C.
Watt, A. J. 6198
Watt, R. F. 2281
Watterston, K. G. 3262
Wätzig, H. 4350
Wayman, M., Anderson, C. B., and Rapson, W. H. 6700
Ważyńska, J., and Oknińska, B. 3781
Wear, J. F., Pope, R. B., and Orr P. W. 1152
— see Lund, H. G.
Weatherwax, R. C., and Tarkow, H. 1365, 6333
Weaver, H. 3880
Webb, C. D. 2923
— and Darby, S. P. 523
Webb, L. J., and Tracey, J. G. 3527
— et al. 359
— see Kikkawa, J.
Weber, E. 402
Webster, C. C. 2434
Webster, G. L. 1926
Webster, H. H. see Sackett, S. S.
Webster, R. J. 3894
Webster, R. K., and Butler, E. E. 5197
Webster, S. R., Youngberg, C. T., and Wollum, A. G., II 1997
Weddle, A. E. 3907
Wedel, K. W. von, Zokbel, B. J., and Shelbourne, C. J. A. 5161
Weenig, C. see Cole, W. E.
Weenink, R. O. see Hartman, L.
Weesner, F. M. 1796
Weetman, G. F. 2292, 3537
Wehrmann, J. see Kennel, E.
Weidner, K. -F. 5401
Weihe, J. 3312
Weinhold, A. R. see Raabe, R. D.
Weir, L. C., and Johnson, A. L. S. 4148
Weisgerber, H. 4157
— see Zycha, H.
Weiss, H. see Ammer, U.
— see Knell, G.
Weissen, F. 564
— and Reginster, P. 5568
— see Delecour, F.
Weissker, A. 816
Weismann, G. 3174
Weldon, D. 6118
Welker, J. R. see Rios, J.
Wellington, W. G., and Maelzer, D. A. 969
Wellner, C. A., and Lowery, D. P. 1561
— see Ketcham, D. E.
Wells, J. M. see Wicker, E. F.
Wells, O. O. see Henry, B. W.
— see Snyder, E. B.
Wencl, J. 663, 2357
Wendeborn, W. see Sandermann, W.
Wendel, G. W. see Hamilton, J. R.
Wendelken, W. J. 3721
Wenderoth, S. see Yost, E. F.
Wenger, K. F. 3208
Wengert, E. M. 1267, 4536
Wensel, L. C. 6106
Wenske, S. 5401
Wentzel, K. F. 1881, 2435
Wergin, W. 4518
Werker, E., and Fahn, A. 5105
Werkhoven, C. H. E. 3545
Werlich, S. 6176
Wert, S. L., and Myhre, R. J. 2797
— and Roettgering, B. 4414
Westby, R. L. 1143
Westfelt, L. 1337
— and Wickberg, B. 4568
— see Lindström, J. -O.
— see Kolbe, M.
Westhoff, V. 76
Westin, F. C., et al. 5013
Westing, A. H. 6285
Westoby, J. C. 6222, 6776
Westra, J. J. 2311, 4370
Wetherell, A. J. 3597
Wettstein, D. von 101
Whatley, B. T., Thompson, S. O., and Jefferson, J. H. 3757
Wheeler, E. Y., Harold, M. R., and Wylie, A. E. 4689
Whitaker, M. 4428
Whitbread, R. 4132
White, C. D. 267
White, D. P. see Harlan, R. L.
White, E. J. see Carlisle, A.
White, G. 5572
White, J. F. see McAlister, R. H.
White, K. L. 229
White, M. G. 1478
White, P. R., Tsoumis, G., and Hyland, F. 6067
White, R. K. see Chowdhury, K. A.
Whiteside, I. D. 1302-3
Whitmore, F. W., and Zahner, R. 4505
Whitmore, T. C. see Greig-Smith, P.
Whitney, H. S., and Baranyay, J. A. 6058
— see Reid, R. W.
Whitney, R. D. 5847
Whittaker, R. H. 350
— and Woodwell, G. M. 2739, 5329
Wiant, H. V., Jr. 38, 3248, 3296-7
— and Powers, R. F. 2023
— see Berry, W. S.
Wiant, M. K., Jr., and Ward, W. W. 6162
Wichmann, H. E. 4254
Wickberg, B. see Westfelt, L.
Wickens, G. E. see Radwanski, S. A.
Wicker, E. F. 4072
— and Kimmey, J. W. 2538
— and Shaw, C. G. 4071
— and Wells, J. M. 5883
Wicker, F. 5807
Wickman, B. E. 4273
Wiebecke, C., and Hartwig, F. 4929
— and Hunecke, D. 1199
Więckowska, I. 3479
Wiedemann, A. M. 344
Wienke, E. see Schimitschek, E.
Wightman, J. M. see Jones, B. E.
Wiklund, M. 5712
Wikstrom, J. H., and Alley, J. R. 6195
Wilbur, W. D. see Raabe, R. D.
Wilcox, H. 2003
— see Tepper, H. B.
Wilcox, J. R. 5158, 5509
— and Farmer, R. E., Jr. 3432
Wilcox, W. W. see Cobb, F. W., Jr.
Wild, H. 5241
Wilde, S. A., Derr, K., and Patzer, W. E. 2202
— and Lafond, A. 283
— Lafond, A., and Fassi, B. 1978
— and Spyridakis, D. E. 2218
Wilde, W. J. J. O. de 5227
Wilhelmi, T. 4382, 5642
Wilhelmsen, G. see Nordby, A.
Wilhite, L. P. see Schultz, R. P.
Wilkinson, R. C. see Yearian, W. C.
Wilkinson, R. E. 245
Will, G. M. 2251, 5016
— and Stone, E. L. 3265
Willan, R. G. M. 1663

Willan, R. L. 6851
Willeitner, H. 4820
— and Langner, G. 1490
Williams, A. H. see Jarrett, J. M.
Williams, A. I. 6547
Williams, D. H., and Kininmonth, J. A. 1541
Williams, E. L., and Cox, D. R. 1198
Williams, E. T. 2827, 4434
Williams, G. J., III 184
— see McMillan, C.
Williams, J. A. see Leven, A. A.
Williams, L. O. 3462
Williams, R. D., and Rambo, R. 555
Williams Sangai, G. R. 3460
Williamson, K. 4913
Williamson, R. L. see Binkley, V. W.
Willing, R. R. see Patov, D. M.
Willis, C. R. see Chan, W. R.
Williston, H. L. 2325, 3819, 3879, 5045, 5588
Williston, R. G. 6845
Wilner, J. 3388
Wilson, A. K., and Spencer, J. S. 4904
Wilson, B. F. 2008
— and Howard, R. A. 6280
Wilson, C. L. see Griffin, B. R.
Wilson, D. A. 4461
Wilson, D. R. see Stransky, J. J.
Wilson, E. E. see Schaad, N. W.
Wilson, E. T. see Lambert, H. L.
Wilson, J. H. 5635
Wilson, J. W. see Squire, G. B.
Wilson, K. I., and Devi, L. R. 5899
Wilson, L. F. 1001
— Waddell, C. D., and Millers, I. 69
— see Carlson, R. B.
— see Miller, W. E.
— see Wright, J. W.
Wilson, R. W., Jr., and Peters, R. C. 4321
Wilson, S. see Young, H. E.
Wilson, S. E. 2732
Wiman, S. see Nilsson, E.
Winer, H. I. see Segebaden, G. von
Winkelmann, H. G. 1207, 5688
Winkler, E. 6803
Winstead, J. E. 183
— see McMillan, C.
Winter, R. 4932
Winterfeld, K. 5758
Winton, L. L. 5179
Wirzberg, B. see Heth, D.
Wisse, J. H. 6307
Witcher, W. see Lane, C. L.
Witkamp, M., and Crossley, D. A., Jr. 40
Witkowski, C. see Kin, Z.
Wittering, W. O. see Dannatt, N.
Wittgenstein, L. see Aldred, A. H.
Wittich, W. 6172
Wobst, A. 1668, 4932
Wobst, H. 3124
Wohlfahrt, E. 3648
Wójcikiewicz, F. 2379, 3970
Wójtowicz, A. 3173
Wolfe, J. C. 1045
— see Danbury, D. J.
Wolfe, M. L. 78
Wolff, G. 1148, 1151
Wolffsohn, A. 2640
Wolkinger, F. see Braun, H. H.
Wollum, A. G., II see Webster, S. R.
Wolter, K. E. 6279
Woltyńska, H. see Szturma, L.
Woltz, P. 5206
Wong, W. H. C., Jr., Honda, N., and Nelson, R. E. 3707
— see Honda, N.
Wonka, R. see Blossfeld, O.
Wood, A. A. see Mostyn, H. P.
Wood, D. C. 6173
Wood, D. L., et al. 2665
— see Silverstein, R. M.
Wood, R. F. 3903
— Miller, A. D. S., and Nimmo, M. 3893
Wood, R. K. S. 4074
Wood, R. O. see Harris, J. W. E.
Wood, T. W. W. 2403
Woodfin, R. O., Jr., and Mei, M. A. 3043
Wooding, F. B. P. 4528
Woods, F. W. see Schultz, R. P.
Woods, T. A. D. 5941
— and Atkins, M. D. 5940
Woodson, G. E. see Wangaard, F. F.
Woodson, R. E., Jr., et al. 196-7
Woodwell, G. M., and Brower, J. H. 2616
— see Botkin, D. B.
— see Forman, R. T. T.
— see Hadley, E. B.
— see Whittaker, R. H.
Woolridge, T. H. 6173
Wooton, T. E., Barefoot, A. C., and Nicholas, D. D. 6322
Worden, H. A. see Peterson, L. O. T.
Worrall, J., and Mergen, F. 1884
— see Mergen, F.
Woźniak, A. see Olszewski, J.
Wraber, M. 5366
Wright, D. M. see Dobie, J.
Wright, H. E., Jr., McAndrews, J. H., and Zeist, W. van 333
Wright, H. L. 4950
Wright, J. G., and Beall, H. W. 5779
Wright, J. P. 6654
— Marks, G. C., and Minko, G. 4335
Wright, J. W., and Barrett, W. H. G. 464
— Wilson, L. F., and Randall, W. K. 157
Wright, K. H., and Harvey, G. M. 6021
Wright, M. K. see Mayrose, C. K.
Wright, R. D. 104, 242
Wu, C. -Y., and Huang, Y-S. 1306
— and Lin, T. -H. 3046
Wuenscher, J. W., and Valiunas, A. J. 5340
Wunderlich, H. see Fiedler, H. J.
Wüster, E. 4611
Wyatt, H. V. see Bottle, R. T.
Wyatt-Smith, J. 4938, 5383
Wylie, A. E. see Wheeler, E. Y.
— see Yaptenco, R. C.

Yacubson, D. 3803
Yadav, J. S. P. 1757, 5011
— see Kahn, M. A. W.
— see Qureshi, I. M.
Yagi, K. 5508
— see Goo, M.
Yagishita, M., and Okanishi, T. 1430
— and Saga, M. 6261
Yagüe Gil, A. 1627
Yaltırık, F. 205, 3477
Yamada, T., and Fushimi, T. 5390
— see Kanaya, N.
— see Norimoto, M.
— see Oka, Y.
Yamagiwa, I. see Ito, E.
Yamaguchi, H., and Koizumi, C. 6025
Yamaguchi, K. 1388
Yamaguchi, N. see Shinozaki, A.
Yamai, R., and Kondo, K. 6261
Yamamori, N. 249
Yamamoto, A., Yokota, M., and Takei, A. 6710
Yamamoto, K. see Fujimori, T.
Yaman, I. K. A. 2641
Yanagawa, T., Hirose, Y., and Nakatsuka, T. 1341
Yanai, H. 3154
Yang, J. -C., and Wang, T. -C. 4312
Yang, Y. C. 4369, 6149
Yankov, L. see Nagasampagi, B. A.
Yano, T. see Inoue, Y.
Yao, J. 6331
Yap, C. L. 704
Yaptenco, R. C. 4674
→ Harold, M. R., and Wylie, A. E. 6236
Yarranton, G. A. 6084
Yarwood, C. E. 100
Yashiro, M. 4821
Yasui, H., and Morinaga, J. 6088
Yates, H. O. III 1798
Yatoh, K. -I. 370, 5377
Yavorsky, J., Aróstegui, A., and Sato, A. 4642
Yde-Anderson, A. 2521
Yearian, W. C., and Wilkinson, R. C. 2662
Yearian, W. C., Jr. 1027
Yeatman, C. W. 3417, 5214
— and Holst, M. J. 3402
Yelf, J. T. 6369
Yerke, T. B. 1707
Yerkes, V. P. 6121
— Lloyd, R. D., and Lewis, G. D. 6238
Yie, S. T. 905
Yjjász, E. 4808
Ylinen, A. 1207
— and Jumppanen, P. 4550
Ynalvez, L. A. see Nicolas, P. M.
Yocom, H. A. 5311
Yokota, M. see Yamamoto, A.
Yokota, S. 833
Yokota, T. 4554
— and Goto, K. 1291, 1293
Yoo, J. K. see Kim, D. C.
Yoshida, T., et al. 1649
Yoshimoto, T., Minami, K., and Kondo, M. 1367
— see Minami, K.
— see Peng, J. -Y.
Yosida, M. 3276
Yost, E. F., and Wenderoth, S. 2799
Young, H. E. 2740, 5996
— and Carpenter, P. N. 5328
— Dyer, R. F., and Dube, G. F. 1821
— Robbins, W. C., and Wilson, S. 2731
— see Dyer, R. F.
Young, J. A., Hedrick, D. W., and Keniston, R. F. 3341
— McArthur, J. A. B., and Hedrick, D. W. 646
Young, R. A., and Meyer, J. A. 6576
Young, W. D., and Packman, D. F. 6695
Youngberg, C. T. see Webster, S. R.
Youngman, A. L. 173
Youngs, R. L. 1538
Yska, G. J. 1678
Yttermyr, B. see Bendz, M.
Yung Zu Ko 4304

Zabko-Potopowicz, A. 3180-1
Zabud´ko-Reinhard, T. N. see Reinhard, L. V.
Zachariae, G. 50
Zaerr, J. B. 121
Zagreev, V. V. 1087, 6073
Zagural'skaja, L. M. 45, 911
— see Kozlovskaja, L. S.
Zaharenkov, F. E., and Seleznev, Ju. N. 4777
Zahar'eva, O. I. see Grudzinskaja, I. A.
Zaharov, V. K. 4296
— and Januško, A. D. 4398
Zahiruddin, A. S. M. 5670
Zahner, R., and Donnelly, J. R. 1963
— see Whitmore, F. W.
Zahran, M. A. see Kassas, M.
Zaitlin, M. see Goodman, R. N.
Zajčenko, L. P. 6073
Zajcev, N. A. 6425
Zajčik, M. I., et al. 3975
Zajciw, D. 3327
Zajonc, I. 50
Zajvij, V. A. see Hrulev, V. M.
Zak, B. 6065
Zak, C. A., and Cerling, G. I. 5523
Zak, H. 1551
Zak, J. M., and Wagner, J. 3843
Zakrevskij, P. B. 5710
Zamuco, G. I. T., Jr. 6268
Zanderson, Ja. G. 5665
— see Kalnin'š, A. I.
Zangheri, S. 958
Zanobini, A., et al. 5071
Zaracovitis, C. see Georgopoulos, S. G.
Žarov, V. I. see Marč enko, N. D.
Zašev, B. 5754
Zaugol'nova, L. B. 306
Zavadil, Z. 2234
Zavalishin [Zavališin], A. A. 31
Zavarin, E., et al. 3353, 6760
Zavitkovski, J., and Newton, M. 1975
Zech, W. see Laatsch, W.
Zedler, P. H. see Goff, F. G.
Zehetmayr, J. W. L. 6173
Zeist, W. van see Wright, H. E., Jr.
Zeidler, H., and Straub, R. 362
Zekić, N. see Pintarić, K.
Żelawska, G. see Żelawski, W.
Żelawski, W. 1834, 1889
— and Gowin, T. 160, 1859-60
— and Kinelska, J. 5164-5
— and Niwiński, Z. 161
— and Żelawska, B. 3520
— see Białobok, S.
Želev, I., and Dimitrov, D. 3675
Željazkov, P. 6133
Zel'man, D. P. 5598
Želtikova, T. A. 1977
Želtov, N. M. 5418
Želtvay, et al. 4963-4
Ždendaev, S. G. 718
— see Gol'dberg, A. M.
Zenk, R. R. see Peters, C. C.
Zenker, R. see Müller-Stoll, W. R.
Zentsch, W. 2046, 3738
Zeppenfeld, G., Faust, K., and Schönberg, G. 6493
Zeroni, M. see Galil, J.
Zevallos, A. C., and Alvim, P. de T. 2354
Zeyher, E. 3967
Židkov, V. G., Lah, E. I., and Livanov, A. P. 6471
Židovič, A. I. 3106
Ziegler, F. see Eiberle, K.
Zeigler, H. 2910, 6297
—Kemfert-Lindow, M., and Dreibusch, G. 1521
Ziemer, R. R., Goldberg, I., and Macgillivray, N. A. 4991
Ziesing, H. 6176
Ziganšin, R. A. 1079
Žilkin, B. D. 583
Zimmerman, K.-G. 6848
Zimmermann, M. H. 1851
— and Tomlinson, P. B. 1239
Zimmermann, M. H.—continued
— see Tomlinson, P. B.
Zimny, H. 582
Zinbo, M., and Timell, T. E. 2981, 4580
Zinno, Y., and Chiba, O. 2553
— see Chiba, O.
Žirin, V. M. 2690
Živnuska, J. A. 4458
Živojinović, D. 5777
Zjabčenko, S. S. see Volkov, A. D.
Zlatanov, S. 6037
Zlobin, Ju. A. 357
Znaimer-Wazda, F. 1630
Zobel, B. 1665, 5146
— et al. 6314
— see Roberds, J. H.
— see Wedel, K. W. von
Zoeten, G. A. de see Schlegel, D. E.
Zohar, Y. see Karschon, R.
Zolotov, R. N. 2216
Zombori, J. see Amrik, L.
Zondag, R. see Bassett, C.
Zorboski, M. 683
Zorina, G. A. see Hutorščikov, I. S.
Zöttl, H. W., and Kussmaul, H. 5002
Zubkova, T. I. 5952, 6006
Zubov, Ju. P. 2117
Žufa, L. 3436
Zuijderhout, G. F. P. 5226
Zukert, N. V. see Vygodskaja, N. N.
Žukov, A. M. 2385
Žukova, G. Ja. 1828
Zundel, R. 3200
Žuravleva, M. V. 5094
Zvirgzd, A. V. 3773
Zwart, F. N. see Broekhuizen, J. T. M.
Zwölfer, H., and Pschorn-Walcher, H. 5923
— see Pschorn-Walcher, H.
Zycha, H. 4101
— and Weisgerber, H. 2572
— see Dimitri, L.
Zyska, B. J. 1463

SPECIES INDEX

Abarema spp. 217
Abatia borealis 3462
Abies spp.
bark
anatomy 5191
cone preservation 199
decorative greenery 3908
dwarf forms 3757
foliage
effects on entomopathogenic bacteria 4182
genetics/breeding 2160
injury by
exposure 5433
mice 4162
morphology 5125
planting stock 3818
pollen 3393
propagation, vegetative 3757
provenance trials 447, 2160
regeneration, natural 5429, 5433
resin 1644
root system 3570
seed
sorting 3734
taxonomy 5125, 5204
wood
anatomy 6662
chemistry 2981
defects 6662
A. alba
bark 1089, 2700
barking 3946
chemical constituents 94, 6029
cone
morphology 1865
conversion of stands 5370
crown dimensions 2754
diseases and disorders 360, 2518, 5860
distribution 238, 331, 360, 3183, 3456, 3511-2
ecology 3511, 3624, 5344
economics 1183
felling 3667
foliage weight 6761
forest types 238, 360, 392-3, 3624, 3666, 5366, 5369
genetics/breeding 1876, 2160
increment and yield 1127, 2140, 2754, 2808, 4384, 4397, 5266
injury by
frost 5760
wind 755, 5756
insect pests 360
Col. 6014, 6029
Hem. 928-9, 2614, 5930, 5937
Dipt. 5930
Hym 6041
light relations 3368
logging 6209
management 1160, 6178
nursery practice 5552
nutrition 5265-6
oils 6761
physiology 5101
plantations in
Germany 5451
Rumania 5431
planting stock 5552
pollen 3394
production, biological 5250
Abies alba—cont.
propagation, vegetative, grafting 537, 2234
provenance trials 2161, 5503
regeneration, natural 402, 2041, 2122-3, 3666-8, 5430-1
seed
certification 5503
morphology 1865
storage 2185
silviculture 392-3, 3666-7, 5370
site quality 4354, 5265
soil requirements 5265-6
stand structure 2088, 6166
succession 336, 360, 3666
valuation tables 2824
variation 5183
virgin stands 2088
water relations 3368
wood
anatomy 1236, 2903, 4515
borers 1524
chips 1551
nail-holding properties 4571
particle board 6715
permeability 2947
pulpwood 6209
sawmill studies 4670, 6234
storage 1551
strength properties 6351
A. amabilis 931, 1333, 2581, 5813, 5941, 6335, 6345
A. balsamea
balsam 1646
bark chemistry 3162
browse 5060
chemical constituents 6029
diseases and disorders 4097, 5894
distribution 3514
foliage
moisture 5783
forest types 2096-7, 5346
genetics/breeding 1877
increment and yield 3878
insect pests 5962-3, 6029
logging 2398, 3966, 5434-5
mixtures 3878
production, biological 5326
pruning
natural 323
regeneration
natural 3670, 4289, 5434, 5610
soil(s)
effect on 5282
stand structure 5346
thinning 3878
weed control 5607
wood
anatomy 1235, 4517, 6286
chemistry 1248, 1332-3, 6286
durability 4738
reaction wood 1248, 4517, 6286
A. borisii-regis 2738, 3219
A. bornmuelleriana 2160, 3394, 4380
A. cephalonica 2160, 3394, 6029
A. cilicica 3174, 6029
A. concolor
bark 1632
chemical constituents 1632, 3174
disease resistance 2565
Abies concolor—cont.
injury by
frost 449
rodents 2127
insect pests 2665
oils 3174
planting stock 5567
provenance trials 2161
regeneration, natural 407, 2127
weed killers, effects of 5800
wood decay 4106
A. concolor var. lowiana 2161
A. equitrojani 3394
A. fraseri 1154, 4189-90
A. grandis
chemical constituents 3174
cone maturity test 482
control, chemical 2420
diseases 2565
fertilizers 5613
increment and yield 960, 1118, 3685
injury by
frost 3835
mice 4162
insect pests 931, 960, 4179, 5940, 5942, 5965, 6029, 6034
leaves, area measurements 5131
litter/humus 39
nursery practice 541
oils 3174
plantations in
Czechoslovakia 3685
Germany 5451
Ireland 2281
plantations on
peat 2281
pseudogleys 3835
planting stock 541
provenance trials 448
regeneration, natural 3341
seed storage 2185
site quality 2243
water relations 3835, 5264
wood
anatomy 931, 5942
chemistry 1333
drying 6316
moisture relations 6316
pulping 4790
veneer
cutting 6473
wood-wool/cement slabs 6702
A. grandis × A. procera 499
A. holophylla 1086
A. homolepis 434
A. koreana 3174, 6029
A. lasiocarpa
distribution 3501, 3644
forest types 3644, 5393
genetics/breeding 1877
injury by wind 4003
insect pests 931, 3501, 4274
regeneration, natural 5313, 5437
seed
germination 5313
storage 2184
silvicultural systems 5437
soil requirements 5393
succession 3501, 5342, 5393
wood
anatomy 931

Abies lasiocarpa—cont.
chemistry 1333
pulp 4795
A. lowiana see A. concolor var. lowiana
A. magnifica 62, 3502
A. magnifica var. shastensis 3502, 5313
A. mayriana (A. sachalinensis var. m.) 1293
A. nebrodensis 3394
A. nephrolepis 2093, 2751
A. nobilis see A. procera
A. nordmanniana
chemical constituents 1029, 3174
forest types 2086
genetics/breeding 2160
increment and yield 2137, 4397
injury by frost 5760
insect pests 930, 1029, 2645
oils 3174
plantations in
Czechoslovakia 426
Rumania 5431
provenance trials 2160
regeneration, natural 5431
water relations, hydrological 1780
A. pindrow 3085, 3559, 4831, 5068, 6692
A. pinsapo 3394
A. procera 2565, 3174, 3502, 4793, 5313, 5450
A. religiosa 2103
A. sachalinensis 2220, 2226, 2427, 2615, 2788, 5457, 6305, 6645
A. sachalinensis var. mayriana see A. mayriana
A. sibirica 403, 838, 1079, 2038, 2252, 4162, 4203, 4311, 4397
A. spectabilis 1663
A. veitchii 3174, 3600, 6029
A. webbiana see A. spectabilis
Acacia spp. 51, 1651, 2144, 3902, 4923, 5134, 5398, 6002
A. albida 3508, 4800, 4809, 6267
A. aneura 5648
A. aroma 5081
A. baileyana 5512
A. brevispica 3902
A. brevispica subsp. dregeana 5223
A. catechu 6733
A. catenulata 383
A. caven 5081, 5135
A. circummarginata 1929
A. confusa 1638
A. cyanophylla 263, 5512
A. dealbata (A. decurrens var. dealbata) 2062, 5589
A. decurrens 5512, 6743
A. decurrens var. dealbata see A. dealbata
A. decurrens var. mollis(sima) see A. mearnsii
A. delagoensis 1929
A. ehrenbergiana 6267
A. georginae 1824, 2333
A. gerardii 5635
A. gillettiae 1929
A. giraffae 5391
A. goeringii 1929
A. harpophylla 327, 383, 3597, 5272
A. horrida 639
A. ixiophylla 6754
A. karroo 44, 3301
A. kempeana 3370
Acacia koa 6260
A. laeta 3919
A. luederitzii & A. l. var retinens 1929
A. macracantha 1951
A. mearnsii (A. decurrens var. mollis(sima), A. mollissima)
bark 1628
chemical constituents 91, 1628
diseases and disorders 3866, 4294-5
increment/yield 3866
insect pests 4219
plantations in Brazil 5657
planting stock 3800-1
regeneration, natural 5429
site preparation 3720
sowing, direct 3801
tanstuffs 5657
tending 3866
wood chemistry 1352
wood pulp 1578
A. mellifera var. detinens 2490
A. mollissima see A. mearnsii
A. monticola & A. montigena 5233
A. mucronata 5862
A. nilotica 5365
A. nilotica subspp. adansonii & adstringens 5223
A. pendula 5512
A. peuce 236
A. phlebophylla 1639
A. polyacantha 5635
A. raddiana 5648
A. reficiens & A. r. subsp. misera 1929
A. retinens 1929
A. salicina 5512
A. schweinfurthii 5223
A. senegal 3919
A. senegal var. leiorhachis 1929
A. seyal 4809
A. shirleyi 383
A. sophorae 5512
A. torrei 5223
A. uncinata 1929
A. welwitschii subsp. delagoensis 1929
Acer 3474-6
Acer spp.
anatomy 3474
control, chemical 628, 631, 5636
diseases 824
flowering 3474
forest types 1663
fruiting 3474
insect pests 2684
litter/humus 3280-3
logging 5414
logs, protective treatment 6648
palaeoecology 28
phloem 4528
plantations in Ukraine 3692
propagation, vegetative 540, 3785, 3787
silviculture 5636
taxonomy 203, 3474-6
thinning 628, 631
wood
anatomy 3474
bending 3028
chips 1551
colouring 3030
decay 5832
drying 6642
Acer spp.—cont.
improved 3070
particle board 1597
sawmilling 3039-40, 4672
stain 2684
storage 1551
strength properties 6361
veneer 2684, 3028
A. campestre 2063, 5352, 5599
A. cinerascens 333
A. circinatum 2486, 5803
A. dasycarpum see A. saccharinum
A. ginnala 2188-9
A. macrophyllum 808, 2420, 2486, 4770, 6377
A. mono 4657
A. negundo
chemical constituents 1636, 3354
diameter variation 132
growth substances, effects of 125
injury by fumes 4021
light relations 1956, 3524, 5257
medicinal products 1636
nursery practice 518
physiology 125, 4021
pollen 4980
treatment 492
shelterbelts 2330, 5608
thermal relations 1956, 3524, 5257
water relations 132
weed control 5608
A. platanoides 1828, 2063, 2188, 4014, 5599, 6295
A. pseudoplatanus 97-8, 123, 125, 143, 1954, 2436, 2824, 3373, 3843, 5112
A. rubrum
control, chemical 623, 627, 629, 630, 809, 2420, 5639
distribution 3514
flowering 5310
growth substances, effects of 4504
insect pests 990
measurement, tree and stand 6129
regeneration, natural 5610
root growth 2008
root/shoot ratio 2007
seed
production and germination 5310
seedling(s) development 5318
weedkillers, effects of 809, 5639
weight, tree 6129
wood 6253
anatomy 1239, 4504
borers 4745
density 6129
stain 2684
veneer 2684
A. saccharinum (A. dasycarpum) 1249, 2189, 6253
A. saccharum
chemical constituents 4582
control, chemical 627, 2420
conversion to timber production 5423
diseases and disorders 2511, 4120, 4138, 5831, 6070
distribution 3514
ecology, general 5346
fertilizers 4120
flowering 5310
foliage
moisture 5783
forest types 3638, 5340, 5346

Acer saccharum—cont.
fruits 315
genetics/breeding 3428
increment and yield 5423
injury by
nematodes 4120
salt 4014
insect pests 949, 2684
litter/humus 50
logging 2397
planting stock 560
root(s) 4582
sap sugar and syrups 2349, 3920-1, 5668
seed
production and germination 5310
stand structure 5346
water relations 254
hydrological 5039
wood
anatomy 2512
chemistry 4582
defects 4720, 5837
gluing 6466
improved 6466, 6576
moisture relations 4568, 6317
strength properties 4568
A. spicatum 3514
A. tataricum 2188-9 3742
Aceraceae 5133
Acicalyptus spp. 6258
Adenanthera pavonina 6413
Adenostoma spp. 5095
Adina microcephala var. galpini wood 1455
Aegiceras corniculatum 2105
Aegialitis annulata 110
Aesculus hippocastanum 316, 1921, 2922, 6289
A. turbinata 6572
Aextoxicon punctatum 1278
Affonsea pteropoda 217
Afrormosia (Pericopsis) 1948
Afrormosia sp. 4593
A. [Pericopsis angolensis f.] brasseuriana 1930
A. elata 5601, 6310, 6634
A. laxiflora 1314
Afzelia sp. 1604-5, 4593
A. africana 1232
A. bella 5291
A. bipindensis 1232
A. pachyloba 1232
Agathis 1948
A. spp. 4104, 5286
A. alba (A. dammara, A. loranthifolia) 285, 1369, 2866, 2985
A. borneensis 3603
A. brownii see A. robusta
A. dammara see A. alba
A. loranthifolia see A. alba
A. microstachya 1645
A. palmerstonii 6669
A. robusta (A. brownii) 5597
A. vitiensis 6258
Ailanthus altissima (A. glandulosa) 430, 1921, 3844
Alangiaceae 5143
Alangium 1948
Albiz(z)ia spp. 1529-30
A. evansii 5223
A. falcata 2146, 4318
A. julibrissin 3757, 4118, 5671
A. lebbek 993, 1518, 5134
Albiz(z)ia odoratissima 993
A. petersiana subsp. evansii 5223
A. procera 993
A. vaughanii 5223
Alchornea spp. 5219
Alectryon excelsus 6746
Aleurites spp. 2131
Aleurites moluccana 4319
Allospondias
Alnus spp.
barking 694
distribution 2868
forest types 3625
genetics/breeding 1868, 3431
injury by
fumes 4023
measurement, stacked wood 1109
nutrition 5286
physiology 1857
planting stock 3810
root(s) 5262, 5282
site requirements 5262
wood
chips 4779
improved 4710
particle board 1597-8
piles 6496
preservation 6496
properties & uses 2868
pulping 1106
storage, chips 4779
A. barbata see A. glutinosa var. b.
A. cordata 233
A. firma (A. sieboldiana) 218, 5189
A. formosana 2895
A. glutinosa
conversion of pioneer stands 575
distribution 2868
forest types 353
genetics/breeding 3431
growth substances, effects of 125
increment and yield 4397
injury by
fumes 5767
ice 2431
insect pests 5930
N fixation by 5656
nursery practice 519, 2218
nutrition 3555, 5656
plantations on
spoil mounds 575, 2265
propagation, vegetative 2226
root nodules 3555
seed
germination 3738, 3743
storage 3738
treatment 3743
shelterbelts 5656
soil fauna 49
underwood 353
weedkillers, effects of 4058
wood
chipping 4652
defects 4782
properties and uses 2868
A. glutinosa var. barbata (A. barbata) 4530
A. hirsuta (A. tinctoria) 3431, 5189
A. hirsuta var. microphylla 2226, 3431
A. hirsuta var. sibirica (A. sibirica) 2429
A. incana
chemical constituents 5070
Alnus incana—cont.
conversion of pioneer stands 575
forest types 5347
growth substances, effects of 2274
increment and yield 4397
injury by
fumes 5767
plantations on
sands 5299
spoil mounds 575, 2265
root(s)
growth 5299
root system 1998
seed(s)
germination 3743
treatment 3743
water relations
hydrological 5347
wood
distillation, dry 6734
A. inokumae see A. hirsuta var. microphylla
A. japonica var. arguta 3431
A. jorullensis 2868
A. pendula 5189
A. rubra 1535, 1974-5, 1996, 2420, 2486, 2868, 5249, 5277-8, 6696
A. rugosa 4804
A. sibirica see A. hirsuta var. sibirica
A. sieboldiana see A. firma
A. fenuifolia 5868
A. tinctoria see A. hirsuta
A. viridis 2507, 5320
Alphitonia 1948
Alstonia actinophylla 445
A. boonei 5442
A. congensis 3167
Altingia excelsa 3603
Amorpha fruticosa 2265
Amyema miquelii 5805
Amygdalus see Prunus
Anacardiaceae 206, 5203
Anacardium nanum 1862
A. occidentale 876, 5594
Anisoptera glabra 1383, 1576, 6588
A. thurifera 6454
Annonaceae 5203
Anogeissus pendula 5444
Anthocephalus cadamba (A. indicus) 1946, 4402, 5103, 6693
Antiaris africana 1314, 3030, 3078-9, 3900
A. toxicaria 4758, 6268
Antirhea putaminosa 3168
Apocynaceae 1912
Apodytes dimidiata 6449
Aporusa spp. 5219
Araliaceae 3460
Araucaria 1948
Araucaria spp. 4104, 5286
A. angustifolia 379, 1099, 1113, 1666, 2131, 2313, 2566, 3052, 5466
A. araucana (A. imbricata) 3803
A. bidwillii 2985
A. brasiliensis see A. angustifolia
A. cunninghamii
chemical constituents 5074
fertilizers 2294, 5597
plantations in
Papua and New Guinea 3192
Queensland 3661, 3885
pruning 3885

Araucaria cunninghamii—cont.
site requirements 3527
thinning 3885
weed control, chemical 3850
wood
defects 6669
drying 6669
gluing 4648
shrinkage 1283
A. imbricata see A. araucana
Araucariales 1334
Arbutus menziesii 6377
Arceuthobium sp. 5808
A. americanum 4072, 5806
A. campylopodum 2493
A. campylopodum f. abietinum 4072
A. campylopodum f. campylopodum 4072, 5807
A. campylopodum f. laricis 4072
A. campylopodum f. tsugensis 4072, 5809
A. douglasii 4072-3
A. globosum 5811
A. pusillum 5816
A. vaginatum 4073
Arceuthos drupacea see Juniperus d.
Archidendron royenii 217
Arctostaphylos spp. 5887
Argania sideroxylon 5648
Artemisia spp. 6763
Artocarpus integrifolius (A. heterophyllus) 3161
A. rubrovenia 6268
Arundinaria spp. 1917
Ascarina 1948
Ashtonia excelsa 5219
Aspidosperma capitatum 3462
A. polyneuron 379
A. quebracho-blanco 5977
Astronium 5217
A. balansae 379
Athrotaxis selaginoides 4586
Atriplex spp. 5648
A. canescens 5513
A. halimus 5648
Aucoumea klaineana 2146, 4502, 4778, 6647
Austrocedrus see Libocedrus
Avicennia 3497
A. marina 3632, 6267
A. marina var. resinifera 2105
Azadirachta indica 1643, 4809, 5897

Baccaurea spp. 5219
Baikiaea plurijuga 4592-3
Balanocarpus heimii 3064, 6390
Bambusa spp. 1917-8, 4822
B. blumeana 1583
B. nutans 4746
B. vulgaris 659, 1583, 3786
B. vulgaris var. striata 1583
Bambuseae see Bamboo(s) in Subject Index
Barringtonia 5222
B. acutangula 1351, 1904
B. ashtonii, B. filirachis, & B. longisepala 5222
B. racemosa 1948
Bassia longifolia 3446
Bauhinia spp. 3487, 5134
Bauhinieae 218
Beaucarnea 2882
Beilschmiedia tawa 2104, 4524, 6300
Betula spp.
control, chemical 5636
distribution 3612
foliage,
effects on entomopathogenic bacteria 4182
forest types 367, 650-1
genetics/breeding 1868, 3430
insect pests 925, 4278, 4280-1
logging 5414
measurement
stacked wood 1109
palaeoecology 3612
silviculture 5636
water relations, hydrological 34
weedkillers, effect of 5636
wood
bending 3028
chips 1551, 4779
fibreboards 3147
hydrolysis 4823
improved 4710, 6575
plywood 6561
preservation 6561
pulping 3147, 6688
storage, chips 1551, 4779
strength properties 6575
veneer 3028
B. alba s.l.
allelopathic effects of 5302
bark 2587, 6674
barking 2997
ecology 3530, 5237
forest types 353
genetics/breeding 176
increment and yield 4390, 4397
injury by
deer 2587
fumes 4022-3
insect pests 2676
litter/humus 4998
logs
protective treatment 6648
measurement
pulpwood 2735, 6124
tables
assortment 4311
volume 2717
mixtures 3875, 5598
nurse to Spruce 2266
nursery practice 3759
propagation, vegetative 3785
seedling development 3759
soil(s)
effects on 276
taxonomy 5237
underwood 353
water relations 1840
hydrological 60
wood
anatomy 6674
chips 1551
decay 1514-6
density 1295, 4556, 6330, 6508
improved 1496
preservation 1488
pulp 1106, 6675
pulping 4802, 6675
pulpwood 1514-6, 2735, 6124
sleepers 1488
storage 1515-6, 1551
veneer
cutting 6664
logs 6508
Betula albosimensis septentrionalis 2922
B. alleghaniensis see B. lutea
B. caerulea & B. caerulea-grandis 177-8
B. corylifolia 2189
B. ermanii 2005, 2314, 6570
B. grossa 4657, 6572
B. japonica see mandshurica var. j.
B. litwinowii 2189
B. lutea (B. alleghaniensis)
chemical control 627
diseases and disorders 4137, 5832, 6070
distribution 3514
fertilizers 760
logging 2397
nutrition 760
seed(s)
germination 135
wood
discoloration 4720
drying 4766, 6635
improved 3070, 6576
moisture relations 1274, 4568
strength properties 4568
B. mandshurica var. japonica (B. japonica; B. platyphylla var. j.; B. tauschii) 50, 2226, 2429
B. maximowicziana 4657, 6408-9, 6570
B. nana 5172
B. obscura 3457
B. oycoviensis 3478-80
B. papyrifera
chemical constituents 3383
control, chemical 630
genetics/breeding 458, 3402, 3429
growth substances in 3383
light relations 4984
nursery practice 3759
seedling development 3759
taxonomy 177-8
wood
anatomy 4522
decay 3091, 6599
storage 6599
B. pendula see B. verrucosa
B. platyphylla var. japonica see B. mandshurica var. j.
B. populifolia 177-8, 3759, 4983, 5323
B. pubescens (see also B. alba & l.)
bark 1090, 2701
chemical constituents 5112
diseases 2552
distribution 238
foliage, effect of reducing 3373
forest types 238
genetics/breeding 458, 1872, 5172
growth substances in 5112
insect pests 2552, 5985
light relations 1738
measurement tables, yield 4399
physiology 3373
B. schmidtii 2189
B. tauschii see B. mandshurica var. japonica
B. tortuosa 5070
B. utilis 1663
B. verrucosa (B. pendula; see also B. alba s.l.)
bark 1090, 2701
chemical constituents 5362
diseases and disorders 881, 5843
fire, resistance 4044

Betula verrucosa—cont.
flowering 2030
foilage, flammability 4044
genetics/breeding 458, 1872
growth substances, effects of 2274, 125
injury by
fumes 4021
frost 5255
light relations 1738
measurement tables, yield 4399
nutrition 2217
phenology 2030, 3525
physiology 113, 4021, 5301
plantations on
open-cast mine sites 3837
pebble beds 1977
sands 5299
root competition 5301
root growth 5299
root system 1998
sap 5669
seed
storage & treatment 3738
shelterbelts 2330
soil(s)
effect on 1977
thermal relations 3525, 5255
water relations 5301
wood
anatomy 6295
chemistry 1317, 1342
decay 5843, 6597
density 1542, 6295
drying 1542, 6634
figure 881
hydrolysis 6728
properties and uses 1542
B. verrucosa var. or f. carelica 3693
Bischofia javanica 2089
Bombacopsis glabra 4844
Bombax gracilipes 1862
B. malabaricum (Salmalia m.) 2242, 6475
B. oleagineum see Bombacopsis glabra
Borassus aethiopum 3470
Boswellia papyrifera 4809
B. serrata 6766
Brachylaena hutchinsii 439, 2862
Brachystegia boehmii & B. bussei 4487
B. floribunda 5635
B. kennedyi 1219
B. laurentii 5601
B. manga & B. microphylla 4487
B. nigerica 1220
B. spiciformis 4487, 5635
Broussonetia papyrifera 6268
Bruguiera gymnorrhiza & B. parviflora 1947
Bulnesia retama 4845
Bumelia spp. 5231
Burkes africana 1314
Bursera delpechiana 5658
Burseraceae 5203
Butea monosperma 661, 1041
Butyrospermum parkii 22
Buxus spp. 940
B. macowanii 4492
B. sempervirens 771, 906, 4006, 4119

Calligonum spp. 5648
C. polygonoides 5293
Callitris sp. 4330
C. articulata see Tetraclinis a.
C. glauca 4529, 6610
C. columellaris 311
C. intratropica 2911, 4529
Calluna vulgaris 3848, 4048, 4239
Calocedrus see Libocedrus
Calophyllum spp. 6258
C. brasiliense 442, 6392
C. inophyllum 88, 4527
C. leucophyllum 1211
C. seriblitifolium 1349, 4591, 6391
C. viliense 1211
Calotropis procera 5293, 6267
Campnosperma brevipetiolatum 1947
Canarium 1947
Canarium spp. 2863, 6258
C. nigrum 6254
Candolleodendron brachystachyum 219
Canellaceae 3459
Capparis aphylla 5592
Caragana spp. 5176, 5608
C. arborescens 3545, 3742, 5909, 5917, 6060
C. frutex 5176
Careya arborea 1904, 6751
Cariniana pyriformis 237
Carpinus spp. 3481
C. betulus
chemical constituents 5352
conversion of stands 5647
diseases 5905
distribution 3183, 5261
forest types 5355
increment and yield 4397
injury by
ice 2431
insect pests 5363
litter/humus 50
regeneration, natural 337, 414, 3673
sap 5669
sap flow 1842
site requirements 5261
succession 5341, 5647
tree classes 1842
variation 5905
weedkillers, effect of 4058
wood
chemistry 1329
particle board 1597
pulp 3136
pulping 3135
pulpwood 1110
C. orientalis 1973, 2116
Carpodetus serratus 6746
Carya spp. 54, 1065, 1457, 2862, 4702
C. glabra 4747, 6130
C. illinoensis (C. pecan) 1900, 3757
C. olivaeformis 5671
C. ovata 6031, 6130
C. pecan see C. illinoensis
C. tomentosa 3382, 6130
Caryocar costarricense 2869
Cassia spp. 5134, 5769
C. fistula 1353
Cassipourea malosana 1214
Castanea spp. 1062
C. crenata 179, 3542, 6743
C. crenata & C. sativa 179
C. sativa
chemical constituents 3384
diseases and disorders 179, 824, 2528
distribution 360
Castanea sativa—cont.
fire
control 788
forest types 360, 788
growth substances in 3384
increment and yield 4400, 6152
inflorescence 3399
insect pests 2352, 2592
measurement
tables
yield 4400
mycorrhiza 1982
plantations in
Hungary 4400
U.S.S.R. 5454
propagation, vegetative 3384
seed
germination 486
tanstuffs 1480
water relations 6152
wood
chemistry 6404
corrosive effects 6404
decay 3084
poles 6500
Castanopsis (Shiia) spp. 3276
C. cuspidata (Shiia c.) 5003, 5327
C. pierreri 203
Casuarina spp. 2144, 5286, 5398
C. cunninghamiana 639, 1068, 3555
C. equisetifolia 5507
C. glauca 639
C. stricta 639
Catalpa bignonioides 1921
C. speciosa 139, 2218
Ceanothus spp. 5095, 5286
C. cuneatus 267
C. integerrimus 4838
C. velutinus 1975
Cedrela spp. 4218
C. calantas see Toona c.
C. odorata (C. mexicana) 2146
C. toona see Toona ciliata
Cedrelopsis grevei 6396
Cedrus spp. 199, 431, 524, 3688, 3734, 3757, 4122, 5125, 5151, 5191
C. atlantica 228, 233, 2139, 2639, 3689, 3844, 4193
C. deodara 432, 1257, 1310, 1523, 3559, 3689
C. libani 3393, 3726
Ceiba pentandra 6252
Celastraceae 5203
Celtidaceae 3495
Celtis australis 3760, 5648
C. kraussiana 2864
C. laevigata 891
C. spinosa 5081
Cephalostachyum spp. 1917
Ceratonia siliqua 5648
Cercidiphyllum japonicum 6408-9
Cercocarpus montanus 5513
Ceriops tagal 1947
Chamaecyparis spp. 527, 2940, 3757, 3904
C. lawsoniana 524, 1305-6, 2966, 3734, 4793
C. obtusa
chemical constituents 1825
fertilizers 4605, 5617
increment and yield 4605
litter/humus 5003
measurement
tables
volume 6088

Chamaecyparis obtusa—cont.
pruning 5640-1
seed
germination 312
site requirements 1119
thinning 5628
wood
anatomy 2965, 4605
chemistry 1367-8, 4605, 6408-9
density 4605
fibreboard 4821
fireproofing 6578
improved 1494, 6564
moisture relations 2966
shrinkage and swelling 1312
strength 2965-6, 6370, 6520
variation with growth factors 4605
veneer 6578
working properties 1389
C. pisifera 1389, 4516
C. taiwanensis 1649
Chlorophora excelsa 1529, 3574, 4502, 4593, 5442, 6310
C. regia 1314, 6310
Chloroxylon swietenia 3165
Chomelia spp. 1931
Chorisia incana 1924
Chosenia arbutifolia 370
Chryosphyllum spp. 4497
C. africanum 4497
C. roxburghii 1948
C. subnudum 4497
Cinnamomum sp. 6254
C. camphora 6408
Cistanthera see Nesogordonia
Citrus spp. 2932
C. limon 5254
Claoxylon spp. 5219
Clausena dentata 6747
Cleistanthus spp. 5219
Cleistopholis glauca 5601
Clusiaceae 5203
Cochlospermaceae 3459
Cocos nucifera 1596
Cola gigantea 4758
Cola marsupium 5303
Colophospermum mopane 2988, 5635
Colutea 220
C. arborescens 3844
Combretaceae 5202
Combretum spp. 268
Combretum apiculatum 5635
C. gazalense 5635
C. molle 4487
Compositae 206
Conocarpus lancifolius 4809
Copaifera langsdorfii 1862
C. mopane see Colophospermum m.
Copernicia alba 6767, 6771
Cordia africana 2864
C. millenii 4758, 5442, 6252
C. platythyrsa 6252
Cordyline 2882
Coriaria spp. 5286
Cornaceae 206-7
Cornus spp. 4070
C. florida 3278, 5284
C. sanguinea 284, 3473, 3768
Corokia buddleioides 6746
Corylus spp. 1663, 2063
C. avellana 56, 1982, 3768, 3848, 5355, 5362-4, 5542, 5671
Corynocarpus 1948
C. laevigatus 2104
Cotinus see Rhus
Cowania mexicana 5513
Crataegus spp. 981
Crataeva religiosa 1947
Cratoxylum 5221
Crossostylis 1947
Croton spp. 5219
C. tchibangensis 4800
Cryptomeria japonica
chemical constituents 2985
competition, intraspecific 5300
dendrochronology 6158
diseases and disorders 5886
fertilizers 4605, 5616, 6415-6
flowering 2176
forest types 5378
genetics/breeding 1878, 3407
increment and yield 249, 326, 4605, 6145
injury by
frost 2428
mites 1072
measurement tables
taper 4312, 6087
volume 4312
nursery practice 5528
plantations in
India 5458, 6145
Poland 3904
planting stock 326
propagation, vegetative 2227
provenance 249, 1878
pruning 5640-1
site quality 2056
soil requirements 249
stand
structure 5378
water relations
hydrological 67
wood
anatomy 1281, 4605, 6294, 6296, 6298, 6415-6
chemistry 1367-8, 4605, 6298 6408-9
decay 3092, 6596
defects 1558, 3123
density 4605, 6415
fibreboard 4821
improved 6572
juvenile 6415
permeability 1293, 2946
sawmilling 1383
shrinkage and swelling 1281
strength properties 6415
variation with growth factors 4605
Cunninghamia 5139
C. lanceolata 1242, 5466
Cupressocyparis leylandii 2867
Cupressus spp.
anatomy 5263
chemical constituents 2985, 3351
cones 201, 5140
diseases 2542
general information 232
genetics/breeding 3351
insect pests 5944
physiology 5263
pollen 5151
propagation, vegetative 538
seeds 5140
taxonomy 201, 232, 3351
thinning 5629
water relations 5263
wood defects,
spiral grain 6658
Cupressus arizonica 2247, 4122, 5498
C. benthamii 4268
C. cashmeriana 6145
C. funebris 5498
C. glabra 5263
C. lindleyi 4268
C. lusitanica 1369, 2149, 2714, 3351, 3406, 5498
C. macrocarpa 639, 4122, 5976
C. pygmaea 5498
C. sempervirens 92, 639, 3393, 4122, 4490, 5252, 5263, 5976
C. torulosa 92
Cybistax (Tabebuia) donnell-smithii 6388
Cyças thouarsii 5206
Cyclobalanopsis see Quercus
Cylicodiscus gabunensis 1529, 6610
Cytisus spp. 5176

Dacrydium spp. 1231, 2881
D. bidwillii 1335
D. colensoi 134
D. cupressinum 3170
D. elatum 1383, 1576, 3087, 6258, 6588
D. franklinii 4584
Dacryodes 1925
D. excelsa p. 569 (Dominica)
D. kukachkana 3462
Dalbergia baronii 6393
D. cochinchinensis 4244, 6587
D. latifolia 2791, 5444, 6454
D. paniculata 4150
D. sissoo 5177, 5444, 5898
Daniellia oliveri 1314
Daphne laureola 3473
D. mezereum 3473
Dasylirion 2882
Davidia involucrata 3757
Delonix regia 5134
Dendrocalamus spp. 1917
D. giganteus 659
D. strictus 436, 1240, 1584, 4799
Dendrophthoe falcata 821
Dendroseris 209
Dialium cochinchinensis 6587
Dichapetalum 1947
Dicorynia guianensis 1221, 3098
Didelotia brevipaniculata 6255
Didymopanax morototoni 6269
Dillenia 1948
Dilleniaceae 210-1, 3459
Dinochloa spp 1917
Diospyros chloroxylon 1347
D. kaki 3439, 6572
D. melanoxylon 6228, 6751
D. sylvatica 5077
D. virginiana 3439
Dipholis 5231
Dipterocarpaceae 3646, 4503, 5382, 6690
Dipterocarpus spp 3064, 3603, 4491, 6261, 6690
D. alatus 1383, 1576, 1903, 6588
D. cornutus 1304
D. grandiflorus 2946, 6454, 6613, 6690
D. insularis 1383, 1576, 6588
D. kerrii 1757
D. tonkinensis 6254
D. tuberculatus 4492
D. turbinatus 1757
Dipterodendron costaricense 2049
Discoglypremna caloneura 4800
Distemonanthus benthamianus 6407

Distylium racemosum 1383
Dodonaea viscosa 263, 6267
Dolichandrone spathacea 1947
Dracaena 2882
Dracophyllum recurvum 6746
Dryobalanops spp. 1223, 3064, 3603, 6261, 6690, 6732
D. aromatica 6454
Drypetes spp. 5219
Duabanga 3396
Dumoria africana 6770
D. (Mimusops) heckelii 1448, 4502, 4542, 6263, 6313, 6373, 6454-5, 6770
Dyera costulata & D. lowii 1211
Dysoxylum spectabile 2104

Ecclinusa cuatrecasasii 3493
Ekebergia rueppeliana 2864
Elaeagnus spp. 5286
E. angustifolia 1900
Elaeis guineensis 3471
Elaeocarpus dentatus 380
E. joga 6308
Eleutherococcus senticosus 6753
Encephalartos 198
Endospermum labios & subsp. gracilipes 5220
E. macrophyllum 6258, 6611, 6659
Entandrophragma spp. 2146
E. candollei 5078
E. congoënse 1222
E. cylindricum 1448, 1529, 4502
E. deiningerii 5078
E. palustre 5078
E. spicatum 5078
E. utile 1448, 4502
Enterolobium contortisiliquum 379
Eperua spp. 3704
Eremophila mitchellii 3884
Erythrina glauca 2354
Erythrophleum guineense 1529, 4758
Erythroxylum 1948
E. monogynum 1348
Eucalyptus 1830
E. spp. and hybrids
  aerial photography 1149
  bibliography 221
  burning, controlled 4033, 4053
  chemotaxonomy 1830
  climatic requirements 2146
  competition with grasses 3579
  coppice 5407, 5445
  fire behaviour 4037
  forest types 5398
  genetics/breeding 5146
  injury by
    nematodes 6061
  insect pests 901, 922, 2609, 4241
  litter 5005
  logging 3679, 3963, 5734
  measurement
    tree & stand 4298, 4330, 4336
  nursery practice 3679, 5407, 5445, 5515
  nutrition 5271
  oils 4843, 6764
  phenology 309
  physiology 3370
  plantations in
    Angola 3230, 3679, 5445
    Argentina 1716, 2857
    Brazil 1206, 1666
    Hawaii 3707
Eucalyptus spp. — cont.
    India 2145, 4923, 5271
    Israel 2144
    Morocco 5596
    Pakistan 5459
    Portugal 5407
    Sicily 5734
    Sudan 4847
  planting methods 3679, 5407, 5445
  seed
    storage 5445, 5507
    treatment 5511
  seed orchards 5491
  silvicultural characters 2146
  taxonomy 1830
  tending 3679, 5407
  wood
    chips p. 201 (Australia)
    fibreboard 1206
    poles 4697
    posts 1487, 4703
    preservation 1487, 3058, 4697, 4703
  wood products, general 5407
    properties and uses 3138, 4492
    pulp 3137
    pulping 1571, 1581, 4791-2
E. alba 384, 1071
E. baxteri 269
E. bicostata 2573
E. blakelyi 1858, 4240
E. botryoides 4577
E. calophylla 3139, 4205, 6408
E. camaldulensis (E. rostrata)
  allelopathic effects of 305
  increment and yield 6147
  logging 3962
  measurement tables
    volume 1095
  phenology 3404, 4381
  plantations in
    Ceylon 436
    Israel 263
    Pakistan 5459
    Uruguay 444
  propagation 524
  provenance 3404
  regeneration, natural 3676
  salt tolerance 263
  shelterbelts 639
  water relations
    hydrological 1784
  wood
    chemistry 1319
    drying 4756
    fuelwood 4756
    pulp and pulping 1579, 6691; p. 379 (Italy)
E. camaldulensis var. subcinerea 263
E. cinerea 1629
E. citriodora 435, 2350, 3922, 5459
E. cladocalyx 321, 3440
E. cloeziana 222, 5446
E. cneorifolia 6765
E. confertiflora 384
E. dalrympleana 447, 5465
E. delegatensis see E. gigantea
E. deglupta 3192, 3443
E. diversicolor 3139, 3591, 4205
E. diversifolia 269
E. ficifolia 3793
E. gigantea (E. delegatensis) 2806, 5005, 6293, 6650
E. globulus 305, 444, 1095, 1121, 1579-80, 2009, 3962, 4805, 5583, 6765
Eucalyptus gomphocephala 435, 639, 6408
E. grandis
  chemical constituents 1344
  diseases 5899
  increment and yield 435, 3703
  insect pests 2600, 2612, 6036
  measurement tables
    volume 4317, 6095
  physiology 1344
  plantations in
    Ceylon 436
    India 435
    Zambia 3703
  planting stock 2245, 3780
  seed(s)
    germination 2200
  wood
    anatomy 6293
    borers 1344
    density 6293
    properties and uses 3138
    pulping 1582
E. gummifera 3516
E. incrassata 269
E. kirtoniana 435
E. leucoxylon 263
E. loxophleba 4205
E. macrorrhyncha 1489, 5005
E. maculata 3516
E. marginata 108, 852, 1838, 2317, 2451, 2453, 3139, 4205, 4378
E. melanophloia 5459
E. microcorys 4772
E. microtheca 544, 5459
E. miniata 1241
E. 'Mysore hybrid' 435
E. nitens 2806
E. obliqua 1241, 2958, 4997, 6545, 6673
E. occidentalis 263, 3441
E. ovata 1319
E. papuana 384
E. pilularis 922, 3892
E. polyanthemos 5805
E. populnea (E. populifolia) 3883
E. regnans 581, 1319-20, 1474, 2806, 4185, 6276, 6293, 6650
E. robusta 300, 435, 2157, 4544
E. rossii 5005
E. rostrata see E. camaldulensis
E. rudis 263, 4205
E. saligna 444, 618, 1071, 1536, 2718, 3833
E. 'saligna/grandis' 3703
E. sieberi (E. sieberiana) 1345, 6276, 6456, 6460; p. 201 (Australia)
E. tereticornis 263, 435, 444, 1319, 1909, 4809, 5459
E. todtiana 852, 4205
E. × trabutii 5583
E. umbellata see E. tereticornis
E. viminalis 1629, 2259, 2958, 3110, 4381, 4561, 4755
E. wandoo 4648
Eucryphia 1948
Eugenia spp 6258
E. jambolana 2774, 3161
Euonymus europaeus 284, 3473
E. verrucosus 2063
Euphorbiaceae 1912, 1926
Eusideroxylon zwageri 6610
Exostemma caribaeum 1831

Fagara spp. 6756
  see also Zanthoxylum

Fagara heitzii 4800
F. lemairei & F. leprieurii 6396
F. macrophylla 1214
F. zanthoxyloides 6396
Fagraea 1948
F. fragrans 4599, 6587
F. gracilipes 3087, 6258
Fagus spp. 2618, 5099, 6664
F. crenata
  forest types 371
  soil(s)
    fauna 1773
  wood
    abrasion resistance 1492
    chemistry 1367-8, 6409
    decay 3092, 6596, 6603
    drying 6645
    hardness 1492
    improved 1492, 1494, 6565, 6572
    moisture relations 1309
    permeability 1293, 2946
    strength properties 1309
    veneer
      cutting 4657
    working properties 1389
F. grandifolia
  control, chemical 628, 631
  distribution 244, 3514
  flowering 5310
  fungi associated with 4201
  insect pests 4201
  logging 5414
  palaeoecology 28
  seed
    production and germination 5310
  thinning, chemical 631
  water relations
    hydrological 5039
  wood
    anatomy 1269
    preservation 1485
F. orientalis 212, 400, 413, 1780, 2086, 3654, 3675, 4397, 5244
F. sylvatica (incl. F. moesiaca)
  bark 2587, 6262
  barking 3946
  bibliography 4495
  chemical constituents 115, 317, 5083 5352
  climatic requirements 2081, 5261
  conversion of stands 5419-20
  coppice 4401
  crown dimensions 2754
  diseases and disorders 2686, 4292, 4495, 6071
  distribution 212, 238, 3183, 5261
  economics 1183
  flowering and fruiting 5309
  forest types 238, 362, 392, 3625, 3630, 4333, 5344, 5355, 5366, 5368-9
  fungi associated with 362
  genetics/breeding 180
  growth substances, effects of 125
  increment and yield 2120, 2689, 2754 3193, 4397, 4401, 5428
  injury by
    abiotic agencies 4495
    fumes 2436, 5767
    deer 895, 2587
    drought 5762
    quarrying 2685
    rodents 4163, 5914
    wind 755
Fagus sylvatica — cont.
  insect pests 4228, 4286, 4495, 5933
  light relations 1833, 2993, 3368, 5353, 5428, 6419
  litter/humus 41, 50, 3275, 3279, 4999
  logging 684, 2364, 4439
  log(s)
    protective treatment 6648-9
  management 1160
  measurement
    tables
      assortment 4333, 6116
      taper 6091
      volume 1091, 4311, 4315, 6091, 6116
    tree and stand 1091, 4333
  microclimate 1740
  mixtures 755, 3666, 3893, 5341, 5344
  monograph 1943
  mycorrhiza 362
  nursery practice 5536, 5552
  phenology 2081, 6262
  physiology 125, 1833, 1847, 2912, 4495
  plantations in
    Latvia 2143
  planting stock 2224, 5552
  provenance 5503
  regeneration
    natural 412, 414, 2041, 2122, 3666, 5430
  resources in E. Germany 3193
  root system 3571
  sap 115
  seed
    certification 5503
    germination and nutrient content 317
    storage 2185, 5505
    testing 5505
  silviculture 392, 3659, 3666, 3893, 5419, 5633
  site quality 4401, 6140
  soil(s) 2993, 6419
  stand structure 1141, 2088, 3659, 6166—7
  stem form 3659, 6262
  succession 336, 3666, 5541
  taxonomy 212
  tending, general 3893
  thinning 5633
  valuation tables 2824
  variation 2859, 5173, 5503, 6262
  veteran trees, protection of 6809
  virgin stands 2088
  water relations 3368
    hydrological 1778, 3312
  weed control 5536
  wood
    anatomy 1238, 1269, 2859, 2993, 4579, 4604, 6262, 6419
      growth rings 6295
      heartwood 2910, 4524, 6299
      reaction wood 4520-1
    borers,
      marine 3096
    chemistry 2859, 2910, 4575, 6382, 6401-2
    chips 1551, 1554, 4779
    decay 1507, 3093, 4695, 4736-7, 5843, 6585, 6600, 6607
    defects 1564, 3124, 4603, 4762, 6262, 6299, 6655
Fagus sylvatica — cont.
    density 2993, 4604, 6419
    drying 1546, 3109, 3114, 4757, 4762, 6630
    effects of radiation 1509, 6304
    electrical properties 1272
    fibreboard 3142
    flooring 3114
    furniture 6447
    growth stresses 4603
    hydrolysis 2859, 3150-1, 4825
    improved 4711, 4713
    moisture relations 4542, 4565, 4752
    particle board 1597, 1599, 1605, 4814, 6715, 6718
    physical and mechanical properties 2859, 3124, 6262
    plywood 4676, 4678, 6373
    preservation 1476, 1478, 4595-6, 4705, 6544, 6567
    pulp 3136, 4332
    pulping 2859, 3135, 4806, 6699
    pulpwood 4439
    sawing 2859, 3010
    sawmilling 3038, 4618
    sleepers 4696, 4705
    softening treatment 6472
    stain ('échauffure') 1564
    steaming 1407, 3105, 4752, 6626-7
    storage, chips 1551, 4779
    strength properties 4565, 6351, 6626
    termite damage 6546
    thermal effects on 6401-2
    variation with growth factors 2993, 4333, 4604, 6262, 6419
    veneer(s) 1407, 4676, 6627
      cutting 6472
    waste utilization 6699
Faramea spp. 1931
Ficus carica 204
F. dekdekana 6267
F. infectoria 3161
F. palmata 6267
F. religiosa 3161
Fitzroya cupressoides 1278
Frangula see Rhamnus
Fraxinus spp. 891, 2029, 3358, 5229, 6664
F. americana
  bark 1626
  chemical constituents 1626
  control, chemical 628, 809
  diameter variation 132
  diseases and disorders 882
  flowering 5310
  injury by
    deer 1811
  nutrition 119
  physiology 119, 131-2, 809
  planting stock 560
  radiation, effects of 4027
  seed
    irradiation 4027
    production and germination 5310
  site quality 2749
  soil(s)
    effect on 3553
  water relations 132
  weed control 5606
  wood
    anatomy 1239
F. angustifolia 2431

Fraxinus commemoralis 4657
F. coriariaefolia 223
F. excelsior
allelopathic effects 2017
bark 1626
chemical constituents 1626
coppice 2063
diseases and disorders 5903
forest types 5355, 5364
genetics/breeding 3438
injury by
frost 3835
litter/humus 3302
logs
protective treatment 6649
physiology 113, 1847
plantations on
pseudogleys 3835
poisoning livestock 3445
production, biological 2063, 5364
provenance
trials 459, 2168
regeneration
natural 306, 337
reproductive behaviour 306
root(s)
excretions 2017
seed orchards 3438
seedling
development 2168
valuation tables 2824
water relations 3835
weed control 3848, 5606
wood
anatomy 2893, 6295
colouring 3030
moisture relations 4542
particle board 1597
preservation 1476
pulping 3135
F. holotricha 223
F. mandshurica 5457
F. ornus 1626, 1960, 2116
F. oxycarpa 1626
F. pallisae 223
F. pennsylvanica 1977, 2191, 2215, 2298, 3438, 4118, 5608, 6295
Froesia spp. 6270

Garcinia eugenifolia 6391
G. morella 2987
G. myrtifolia 6258
G. imperialis 5303
Garuga pinnata 2791
Geoffroea spp. 5769
G. decorticans 5081
Gigantochloa spp. 1917
G. aspera & G. levis 1583
Gilibertia spp. 6269
Ginkgo biloba 127-8, 2985, 3386, 3400, 3578, 3904, 5111, 5772
Gleditsia triacanthos 5648, 5999
Glycosmis pentaphylla 4840
Gmelina arborea 437, 3509, 4498; p. 782 (Brazil)
Gnetum gnemon 4574
Gonioma kamassi 4492
Gonystylus spp. 1947, 3080, 3111
G. bancanus 3111
G. punctatus 6258
Grevillea robusta 271, 660, 2147, 5507
Grewia carpinifolia 3900
Guarea thompsonii 1529
Guttiferae 215, 6391

Gymnocladus dioicus (G. canadensis) 5455
Gynotroches axillaris 1641
Gyrocarpus spp. 1928

Hakea suberea 3370
Halimodendron halodendron (H. argenteum) 5176
Haloxylon aphyllum 2690, 6112
Haloxylon persicum 2064
Hamamelis sp. 623
Hardwickia binata 1191
Hazomalania voyroni 216
Heritiera simplicifolia 3042
H. ornithocephala 6258
Hernandia sonora 1928
H. voyroni 216
Hernandiaceae 5203
Hesperoseris 209
Heteromorpha trifoliata 6267
Heterophragma adenophyllum 6751
H. sulfureum & H. vestitum 1923
Hevea brasiliensis 1571
Hexalobus crispiflorus 6454-5
Hildegardia barteri 1314
Hippophaë rhamnoides 579, 3473
Holoptelea grandis 4499, 4758
Homalanthus spp. 5219
Hopea odorata 1903, 6390
H. pierrei 1383, 1576, 6588
H. sangal 2871
Humiriastrum excelsum 4643
Hunteria umbellata 1637
Hymenaea courbaril 657

Idesia polycarpa 5508
Ilex aquifolium 247, 1942
I. paraguensis 2131
Illicium floridanum & I. parviflorum 3486
Illigera spp. 1928
Indigofera sp. 5134
Intsia 1948
I. bijuga 3087, 6258
Irvingia gabonensis (I. barteri) 6770
Isoberlinia see also Julbernardia
I. angolensis 5635
Ixerba brexioides 6746

Jodina rhombifolia 5081
Juglans spp. 879, 1900, 4883
J. hindsii 2494
J. nigra
fertilizers 3867
plantations in
Czechoslovakia 428
Rumania 5431
planting stock 3799
regeneration,
natural 5431
release fellings 619
soil fauna 53
weed control 2272, 5606
wood
colour 6309
colouring 3030
gluing 6454-5
properties and uses 6260
J. regia 95, 638, 824, 2551, 2850, 4027, 5114, 5333, 6272
Julbernardia globiflora 4487, 5635
J. paniculata 5635

Juniperus 3464, 5141
Juniperus spp.
diseases and disorders 3454
forest types 369, 5350
genetics/breeding 201
insect pests 917, 943, 4216, 5944, 5987
plantations in
Poland 3904
pollen 3393
propagation, vegetative 527, 540
radio-isotope accumulation 84
seed
pests 917
J. ashei 149
J. californica 3175
J. communis 94, 1254, 6762
J. communis & f. oblonga (J. oblonga) 6763
J. communis var. saxatilis (J.c. var. sibirica) 265
J. conferta 3843, 4025
J. drupacea 3393
J. indica 1663
J. monosperma 1069, 5513
J. oblonga see J. communis f.o.
J. occidentalis & subsp. australis 3175
J. osteosperma 3175, 4344, 5396
J. phoenicea 2861, 6157
J. polycarpos 6763
J. procera 2862
J. sabina 239, 524
J. scopulorum 5208
J. thurifera 1210
J. virginiana 149, 420, 546, 3553, 3776, 4009, 5208, 5242, 5431, 5652

Kalmia spp. 5282
K. latifolia f. rubra 3757
Kalopanax pictus (K. ricinifolium; K. septemlobus) 4657
Khaya spp. 4218
K. grandifoliola 3164, 4594
K. ivorensis 1216, 2146, 4502
K. senegalensis 1120, 1314, 1653, 4377
Kielmeyera coriacea 6741
K. corymbosa & K. speciosa 6392
Klainedoxa gabonensis 1210
Knightia excelsa 380, 6746
Koelreuteria paniculata 3757

Lacunaria spp. 6270
Laburnum spp. 5176
L. anagyroides 1260, 1921
Lagerstroemia speciosa 1372
Laguncularia racemosa 375
Larix 5125
Larix spp.
allelopathic effects of 5302
diseases and disorders 833, 2524, 2565
fertilizers 5613
genetics/breeding 1867, 1879, 5145, 5151, 5184
injury by
frost 2425
fumes 4018
voles 4163
wind 833
insect pests 943
planting stock 5574
pollen 5116-7

Larix spp. — cont.
propagation, vegetative 2234
provenance
trials 447
resin-tapping 2336
seed orchards 2179
spacing 5574
thinning 2311
wood
anatomy 1125, 4519, 4523
chipping 6470
drying 4769
veneer
cutting 6664
L. × czekanowskii 151
L. dahurica see L. gmelinii
L. decidua
chemical constituents 5307
cones 3408
diseases and disorders 3755, 4153
distribution 5261
fertilizers 5569
fire
resistance 4044
flowering 5307
foliage
flammability 4044
forest types 353, 390
genetics/breeding 2175, 2953, 3408-9, 5184, 5501
increment and yield 2074, 3374, 4397
injury by
drought 5581
frost 3588, 4010
fumes 4018, 5767
hail 5763
snow 4010
squirrels 4168
insect pests 2613, 2681, 4187, 5959, 5989, 6014
leaves, morphology 150
litter/humus 4999
measurement tables, yield 4398
mycorrhiza 1982
nursery practice 5536, 5552
phenology 450, 3519, 5307
physiology 113, 150, 1846, 3374
plantations in
Great Britain 2876
Italy 396
Latvia 2143
Poland 3604
plantations on
heathland 5569
planting site preparation 396, 2258, 5569
planting stock 3810, 5552, 5581
pollen 3588, 5116-7
provenance 150, 2953, 3374, 5501, 5503
trials 450, 2162-4, 2953, 5470
regeneration 390
root(s) respiration 1846
seed
certification 5503
quality 3588, 5501
sorting 3733
testing 3755
seed orchards 2175
site requirements 5261
slash disposal 2258
stand structure 3374
stem form 4010
valuation tables 2824

Larix decidua — cont.
veteran stands 3604
taxonomy 1913
underwood 353
water relations 150
hydrological 1778
weed control 5536
weedkillers, effects of 4058, 5536
wood
anatomy 2876, 2910, 2953
chemistry 2910
decay 6597
defects, spiral grain 2918
density 2953
poles 2918
road drains 4686
thermal properties 6313
L. × eurolepis 450, 2164, 2170, 3409
L. gmelinii (L. dahurica) 34, 513, 2033, 2057, 2092, 2117, 2216, 4397, 5767
L. gmelinii var. japonica (L. kurilensis) 1999, 2515, 5457
L. kaempferi see L. leptolepis
L. kurilensis see L. gmelinii var japonica
L. laricina 1331, 3162, 4153, 5109, 6060, 6287
L. leptolepis
diseases and disorders 834, 2515, 2576, 4149
flowering 5499
genetics/breeding 3409, 5184
growth substances 5499
growth substances in 5110
increment and yield 2170, 4370, 5457, 6145
injury by
frost 3588
insect pests 2613
logging 1186
measurement tables
volume 1094
mycorrhiza 1982
nursery practice 519
physiology 1952
plantations in
Czechoslovakia 426
Great Britain 2162, 2876
India 6145
Ireland 2281
plantations on
peat 2281
sands 5299
planting in slash 2258
pollen 3588, 5116-7
propagation, vegetative 531, 2226, 2228
provenance 1952, 3708
trials 1880, 2164, 5470
root(s) growth 5299
root system 1998, 2515
seed
quality 3588
site requirements 1119
slash disposal 2258
soils, effect on 5281
soil requirements 1880
stand structure 1141, 5457
wood
anatomy 2876, 4793, 6277
chemistry 4793
extractives 1603
particle board 1603

Larix leptolepis — cont.
physical and mechanical properties 6306
pulp & pulping 4790, 4793
working properties 1389
L. occidentalis
bark 6083
diseases and disorders 4153
injury by
insolation 548
mistletoe 4071
regeneration,
natural 3341, 5436
site quality 1114
sowing, direct 548
wood
borers 4236, 4243, 4274
chemistry 1330, 6376, 6381
defects, spiral grain 1560, 1561, 2917
drying 3113
painting 6490
poles 1560, 1561, 2917
L. sibirica
bark 3156
burning 2126, 5851
diseases and disorders 904, 5851
fertilizers 513
increment and yield 4397
injury by
birds 904
fire 1150
frost 3588
mammals 904
mites 904
insect pests 904, 907, 1151, 4203
measurement tables
assortment 4311
volume 4311
yield 4398
mycorrhiza 5523
nursery practice 513
physiology 1952
plantations in
U.S.S.R. 419
plantations on
bogs 573
eroded slopes 580
pollen 3588, 5116-7
provenance 1952
regeneration,
natural 2126
resin-tapping 2337
seed
production & quality 3586, 3588
variation 3586
wood
anatomy 2898
chemistry 4573
density 4556
distillation 3156-7
electrical properties 4708
hydrolysis 4824
improved 4708
particle board 1602
physical and mechanical properties 4573
L. sukaczewii 513, 2143, 2164
Lasiococca spp. 5219
Lauraceae 5203
Laurus nobilis 3330, 5254
Lecythis ollaria 6454-5
Leguminosae 5080, 5176
Leucaena spp. 1905
Libocedrus spp. 5286

Libocedrus (Austrocedrus) chilensis 4561
L. (Calocedrus) decurrens 1636, 4273, 5210, 5264, 6418, 6633
L. (Calocedrus) macrolepis 5211
Ligustrum ovalifolium 3843
Liquidambar formosana 5158
L. styraciflua
buds 3382, 5322
diseases and disorders 891, 4092, 4118
epicormic shoots 5322
genetics/breeding 182-4, 5158, 5175, 5322
increment and yield 2298, 6420
injury by
beavers 891
leaves, morphology 140
nursery practice 519, 523
ornamental 1921
phenology 3382
planting stock 3812
radiation, effects of 4027
seed(s)
irradiation 4027
testing 2191
treatment 493, 3747, 5509
seedlings 5158
suckering 3583, 5127
water relations 2298
wood
anatomy 183, 2923, 5175, 6420
borers 4745
decay 891
defects 1556, 6420
density 6420
preservation 4702
variation with growth factors 6420
veneer 1556, 4656
Liriodendron tulipifera
buds 3595, 5322
diseases and disorders 840, 4098
epicormic shoots 5322
fertilizers 262
flowering 5310
genetics/breeding 5158, 5322
increment and yield 4382
insect pests 319, 2196
mycorrhiza 262
nutrition 262
ornamental 1921
phenology 319
plantations on
old-field sites 2271
propagation, vegetative 528-9
provenance trials 5158
regeneration,
natural 3677
seed
production and quality 5310
seedlings 5318
site quality 6138
soil
fauna and flora 5279
weed control 2271, 5606
wood
borers 4745
colour 1264
defects 1556
density 6337
improved 3068
pallets 1457
preservation 4702, 6529
siding 6529
Liriodendron tulipifera—cont.
veneer 1556, 6482
Liriodendron tulipifera cv. 'Aureo-marginata' 540
Lithocarpus densiflorus 1373, 2716
L. molucca 6272
Loesenera kalantha 6255
Lonchocarpus laxiflorus 5134
Lonicera japonica 5804
Lophira alata (incl. L. procera) 1529, 6590, 6610
Lysiloma bahamensis 3642
Lythraceae 3459

Macaranga spp. 5219
Machilus kusanoi 2895
Macrolobium costaricense 5225
Madhuca longifolia see Bassia longifolia
Maesopsis eminii 2095, 4758, 5442
Magnolia grandiflora 4837
M. kobus × M. stellata 3757
M. obovata 4657, 6370
M. stellata 3757
Mallotus spp. 5219
Malus see Pyrus
Malvales 3397-8
Mangifera indica 3161, 4553, 6612
Mansonia altissima 4500, 4502, 6454-5
Mauritia vinifera 3506
Melia bombolo 438
Meliaceae 4218, 5203, 5442, 5975
Melicytus ramiflorus 380
Melocalamus sp. 1917
Mesua ferrea 1350, 1372, 4834
Metasequoia glyptostroboides 111, 310, 1254, 1940, 3572, 3758, 3784, 3904-5
Metrosideros 1948
Michelia champaca 1123
Microberlinia brazzavillensis 6454-5
Microstrobos 5207
Mildbraediodendron excelsum 4758
Millettia laurentii 6406
M. peguensis (M. ovalifolia), 5228
Mimosa pigra 5134
Mimosaceae 217
Mimusops elengi 6749
Mimusops heckelii see Dumoria h.
Mitragyna spp. 6313
Morus indica 3161
Myoporum 1948
Myrica 5286
M. gale 5091
M. pennsylvanica 3843
Myristica spp. 6258
Myrsine spp. 6395

Nastus spp. 1918
Nauclea (Sarcocephalus) diderrichii 1529, 4593
N. trillesii 1210, 6406
Nectandra lanceolata & N. saligna 379
Neea theifera 1862
Nesogordonia (cistanthera) papaverifera 1529, 4492
Nothofagus 1948
Nothofagus spp. 992, 1921, 1944, 3170
N. dombeyi 1278, 4561
N. fusca 380
N. menziesii 230, 380
N. obliqua 2136, 2759, 3683
Nothofagus procera 2136, 3683
N. pumilio 5413, 6093
N. solandri 380
N. solandri var. cliffortioides 2075
Nyssa 1948
N. aquatica 1556, 3678, 5158
N. sylvatica 1556
N. sylvatica var. biflora 5158

Ochna kirkii, O. squarrosa & O. wallichii 1910
Ochnaceae 3459
Ochrocarpus africanus 1529
Ocotea rodiaei 4491
Octomeles sumatrana 4657
Odyendea gabonensis 4800
Olacaceae 3460
Olea cuspidata 6454-5
O. europaea 2574, 5254, 5350
Ongokea gore 6610
Orbignya spp. 3910
Ormosia balansae 6254
Oroxylum indicum 1262
Ostryoderris stuhlmannii 4487
Ougeinia dalbergioides 6362
Ougeinia oojeinensis 1041, 2791
Oxydendrum sp. 4070
Oxystigma oxyphyllum 1211, 1354, 3061
Oxytenanthera spp. 1917
O. abyssinica 659, 3786, 4800

Pachira insignis 4844
Pachylobus see Dacryodes
Palaquium sp. 6258
P. fidjiense 6258
P. hornei 3087
Palmae 2882, 3396
Palmae see also Palms in Subject Index
Pandanus spp. 940, 1920, 2882, 3472
Parashorea malaanonan 3045, 4677
P. plicata 1224
Paratecoma peroba 6388-9
Parinari excelsa 1214
P. holstii 1214
P. insularum 6258
P. tenuifolia 1214
Phyllostachys reticulata 604, 1773
Parkia biglobosa 5134
P. streptocarpa 1383, 1576, 6588
Parkinsonia aculeata 5134
Paulownia spp. 443
P. tomentosa 86-7
Peltogyne spp. 2988
Peltophorum 6254
Pentace siamensis 6587
Pentacme contorta 1224, 4657
Pentadesma reyndersii 215
Pentapanax spp. 6269
Pericopsis see Afrormosia
Petitia spp. 3498
Phellodendron sachalinense 4657
Phillyrea latifolia 1950
Phoebe clemensii 1640
P. goalparensis 5444
Phoenicoseris 209
Phoradendron tomentosum 822
Phyllocladus 1948, 5207
Picea 3352, 5125
Picea spp.
bark 6383
chemical constituents 6383
decorative greenery 3908

Picea spp. — cont.
diseases and disorders 2524, 4104, 4106, 5887
fertilizers 5613
foliage,
effects on entomopathogenic bacteria 4182
genetics/breeding 5145
injury by
fumes 4018, 5767
mice 4162
nematodes 6062
insect pests 943, 5963-4, 5967, 6050
planting stock 5574
regeneration,
natural 3670, 5429
resin 1644
spacing 5574
weed control 3849
wood
anatomy 4519
chemistry 2981, 6383
decay 4104, 4106
painting 6490
piles 6496
preservation 6496
P. abies
allelopathic effects 406, 2014, 5302
bark 1090, 1616, 1630, 2587, 2701, 4830, 6383, 6674, 6713
barking 3946, 6117
branch size & habit 322, 2930, 5153
buds 136
chemical constituents 94, 1648, 1826-7, 2034, 2587, 2985, 4019, 5069, 6383
christmas trees 926
cleanings 2261, 2300
cone(s) 5152
conversion of stands 5370, 5419
crown dimensions 2754, 5325
crown weight 4352
diseases and disorders
foliage 3453, 4090
galls 4130
nutrient deficiencies 5248
root and butt 844, 847, 2516, 2518, 4101-2, 4117, 5152, 5839-40
seed and seedling 3755, 4090
stem rots 2508, 5830, 5843
'top dying' 4290
virus 4160
distribution 3183, 3529, 5243
drainage, effect of 591, 6203
ecology 3530
economics 1183
fertilizers 513, 561, 563, 598-9, 2293, 2585, 3303, 3822, 3857, 3860, 5519, 5568-9, 5618
flowering 5486
foliage weight 4345-6, 5069, 6761
forest types 390, 650-1, 2755, 3624, 3626-8, 3630, 5344, 5348
frost resistance 3522
fruiting 3586, 5492
genetics/breeding 152-4, 1884, 3410-1, 5152, 5155
growth substances, effects of 547, 2274
habit 2930, 5153
increment and yield 591, 1140, 2074, 2137, 2140, 2266, 2745-7, 2754-5, 2768-70, 3529, 3649, 4351, 4397, 4415, 5424, 5457, 5642, 6203

Picea abies — cont.
injury by
axe wounds 5830
birds 4172
deer 894, 2585, 2587, 3664, 4169, 5575
drought 5762
frost 1883, 2425, 2426, 3522, 3835, 4010, 5759-60
fumes 49, 767, 1075, 1882, 2438, 4019, 4022, 5767
hail 5763
ice 4009
insolation 5248
nematodes 1070, 6060
rodents 4163, 5914
snow 3875, 4010, 4267, 5575
wind 755, 2422, 2424, 3999, 4002, 4267, 5756, 5758
insect pests 2597
Col. 1000, 1006, 1030, 4235, 4267, 6009, 6014
Hem. 926-7, 933-4, 4187, 5930, 5936
Hym. 5504, 6041
Lep. 950, 1151, 4213, 5504, 5961
interplanting
with lupin 583
Lammas shoots 2051
light relations 1737, 1952, 5248, 5425
litter/humus 50, 3275, 3295, 3627, 4998
logging 1093, 1186, 2125, 2358, 2388, 2833, 3956, 3959, 3970, 5425, 5720, 6209
logs
grading 4786
storage 4747
management 1160, 4349-50, 4415, 4431, 5425
measurement
stacked wood 6117, 6123-4
measurement tables
assortment 4311
volume 1091, 4311, 4313
yield 2780, 5434
tree and stand 1091, 1093, 4412, 6080
microclimate 4985
mixtures 755, 3666, 3875, 5344, 5424-5
mycorrhiza 2438, 2074, 5288
nursery practice 286, 513, 516-7, 541, 1000, 2223, 2243, 3770, 5519, 5536, 5552, 5562, 5565
nutrition 270, 1747, 1760, 1885, 1967, 1970, 2217, 3529, 5069, 5248, 5265
oils 6761-2
palaeoecology 3177, 5243
phenology 328, 1884, 2051, 3585, 5154
physiology 1842, 1846, 1885, 2587, 3778, 5101, 5155, 5301
plantations in
Finland 2789
France 561
Great Britain 2135, 2876
Japan 5457
Poland 5152
Sweden 3806
U.S.S.R. 5570
plantations on
grassland 1747
heathland 5569

Picea abies — cont.
old field sites 3806
peat 572, 2281
pseudogleys 3835
planting
methods, 3807, 3821, 5568, 5570
site preparation 3807, 5568-9
planting stock 541, 2256-7, 3810-1, 5552, 5561-2
pollen 155
production, biological 5250
propagation, vegetative 1882, 2226, 2234, 3372
provenance 1952, 2051, 3412, 3728, 5503
trials 447, 1883, 1885, 2165-6, 2168, 2195, 3522, 5471
pruning 2318, 5642
radiation, effects of 2194, 6292
regeneration 390, 406, 5432
natural 394, 404-5, 2041, 2124-5, 3669
resin
chemistry 1648
resin-tapping 2338
root(s)
competition 5301
pruning 5565
respiration 1846, 3297
root system 298, 3570-1, 5565
sap flow 1842
seed
certification 2172, 3728, 5503
diseases & pests 3755, 5504
dressings 3748
drying 3737
fumigation 5504
germination 2034, 3738, 3745, 5314
irradiation 2194
production & quality 2195, 5486
ripening 2034
sorting 3733
storage 2184, 3737-8
testing 2193-4, 3755
seed orchards and seed stands 481, 2172, 3729, 5492
seedling development 5314
shelterbelts 645
shoots, growth 137
silviculture 388, 3649, 5419, 5425
site quality 4353-4, 5265
hardwoods 2266-7
soil(s)
bactericidal activity 3295
cultivation 561
effect on 276, 1748, 3553
fauna 49, 53, 56, 1773, 3303
soil requirements 563, 3529, 5265
spacing 322, 2261, 5575
stand structure 1140-1, 2088, 2790, 3649, 5427, 5457, 6166
stem form 4010, 5642
stems, fused 5324
succession 336, 3666
tanstuffs 4830, 6740
taxonomy 5212
tending 3875, 5425
thermal relations 2266
thinning 613-5, 2261, 2300, 2305-8, 3874, 3876-7, 3959, 3970, 5425
tree classes 1842
underplanting in
hardwoods 2266-7
valuation tables 2824

Picea abies—cont.
variation 2051, 2790, 2930, 3457, 5152, 5154, 5212
virgin stands 2088, 3664
water relations 2266, 3835
hydrological 60, 1779, 3312
weed control 561, 815-6, 2482, 5536
weedkillers, effects of 4058, 5536
wood
acoustic properties 1543, 4534
anatomy 153, 1236, 1269, 2876, 2899, 2942, 4010, 4517, 5152, 6292, 6382, 6674
borers 1524, 4747
chemistry 1321, 1325, 2981, 4580, 6383, 6404
chips 1551
constructional timber 2930, 4679
corrosive effects 6404
decay 1510, 5843, 6586
density 1295, 1547, 2930
drying 1542-3, 1546, 6630
hydrolysis 4823
improved wood 6567
mine timbers 2930, 4668
particle board 1604-5, 1607, 6713
permeability 2947
piles 6586
plywood 4678
poles 6557
preservation 6557, 6567
properties and uses 894, 4493
pulp & pulping 1106, 1321, 2930, 3135, 4441, 6675
resonance wood 1266, 4534
sawing 3956, 3009-10
sleepers 6553
storage 1551, 4747
strength properties 1542, 2930, 4668, 6371
termite attack 1528
thermal properties 4537, 6313
wood wool 6702-3
P. abies lusus labiata 3457
P. alcockiana 950
P. breweriana 540
P. engelmannii
bark 6383
chemical constituents 6383
ecology 2075
economics 2757
genetics/breeding 4946
increment and yield 960, 2757
injury by
mice 4162
wind 4003
insect pests 960, 1002, 4248
mycorrhiza 3561
regeneration
artificial 4259
natural 5437
root system 294
silvicultural systems 5437
site quality 4355
soil flora 3561
succession 5342
thermal relations 1955
wood
chemistry 6383
defects, spiral grain 6657
drying 6640
grading 4558-60
shrinkage & swelling 1284
strength properties 4558-9

Picea glauca
bark 3162, 6383
burning, controlled 4051
chemical constituents 75, 3162, 3352, 4214, 5073, 6383
cone crops 2035
crown form 4412
cytology 5185
diameter variation 132
diseases and disorders 1070, 2565, 3453, 4130, 5827, 5847, 6067
fertilizers 508, 760, 3765, 3869
fire danger 2446
foliage
moisture 5783
forest types 391, 2096-7, 5346
genetics/breeding 1142, 3402, 4946, 5185
increment and yield 2781, 3605, 3869
injury by
birds 75
frost 4005
hail 5763
mites 4288
nematodes 1070, 6060
insect pests 2673, 4214, 4248
leaves
area measurement 5131
light relations 2244, 4984
logging 2397-8, 3966
measurement
aerial photography 4412
tables
volume 2710
tree and stand 2711
nursery practice 508, 542, 803, 2218, 5553, 5565
nutrition 760, 3538
oils 5073
phenology 3605
physiology 3538
planting depth 3821
planting stock 543, 559, 2244, 3796-7 5553
regeneration 314
natural 408, 2042, 3670
root
pruning 5565
system 5294, 5565
seed(s)
production 2035
treatment 495, 3740, 3751
seedling(s)
development 314
shelterbelts 5608
slash weight 2446
stand
structure 5346
taxonomy 3352, 5073
thermal relations 2042
underplanting in Aspen 543
water relations 132
weed control 803, 3722, 5531, 5533-4 5608
weedkillers, effects of 5531, 5533-4
wood
anatomy 4513, 6067
borers 3101
chemistry 6383
density 1142
grading 6345
joists 6350, 6521
pulp & pulping 4795
strength properties 6521, 6350, 6355

Picea glauca var. albertiana 6383
P. jezoensis 2093, 2751, 2788, 3522, 5375, 5457, 6305, 6383, 6603, 6743
P. jezoensis var hondoensis 4149
P. mariana
bark 3162, 6383
chemical constituents 75, 3162, 5073 6383
cone crops 2035
diseases and disorders 1070, 5821
distribution 3514-5
fertilizers 760, 2291-2, 3858, 3868
forest types 1756, 1786, 2096, 5040
genetics/breeding 3402
increment and yield 2779
injury by
birds 75
frost 3868
logging 4289, 5434-5
mistletoe 5810
nematodes 1070, 6060
insect pests 4248
logging 4289, 5434-5
nursery practice 5553
nutrition 760, 2292, 3537
oils 5073
phenology 4005
physiology 3297
planting 5480
planting stock 3797, 5553, 5821
regeneration
artificial 5434, 5480
natural 3671, 4289, 5305, 5434-5
root
respiration 3297
seed production 2035
soil(s)
effects on 3262, 5282
sowing, direct 5480
taxonomy 3352, 5073
thinning 2292, 3262
water relations, hydrological 1786, 3262, 5040
wood
chemistry 6383
joists 6521
strength properties 6521
P. mariana × P. rubens 323
P. morinda see P. smithiana
P. obovata 1886, 4203, 4368, 4397, 4556, 5212
P. omorika 950, 3503, 3835, 4793, 6383
P. orientalis 1005, 1029, 2086, 3393, 4262, 4264
P. pungens
bark 6383
chemical constituents 6383
cytology 130
diseases and disorders 3453, 5895
frost resistance 1959
injury by
fumes 5767
mycorrhiza 3561
nursery practice 803, 2218
physiology 1959
plantations in
Czechoslovakia 426
salt tolerance 3545
shelterbelts 5608
soil flora 3561
weed control 803, 5531, 5533, 5608
weedkillers, effects of 5531, 5533
wood
chemistry 6383

Picea rubens
bark 3162
chemical constituents 1821, 3162, 6383
diseases and disorders 1070
distribution 3514
increment and yield 3878
genetics/breeding 3402
injury by
nematodes 1070, 6060
light relations 4983
mixtures 3878
nursery practice 2243
regeneration,
natural 5306
thinning 3878
wood
anatomy 4517
chemistry 6383
joists 6521
moisture relations 4568
strength properties 4568, 6521
P. schrenkiana 4397, 6077
P. sitchensis
bark 6383, 6744-5
chemical constituents, elements 2034, 5069, 6383, 6744-5
control, chemical 2420
crown dimensions 4341
cytology 5185
diseases and disorders 826, 2525, 3749, 5845
fertilizers 510, 2208, 2282, 3763
foliage weight 5069
frost resistance 3522, 4015
genetics/breeding 1887, 3414, 3790, 5185, 6417
injury by
frost 3522, 3774, 3835, 4015
mice 4162
nematodes 826
windthrow 4000
insect pests 950, 4187, 4225
leaves, area measurement 5131
light relations 5249
nursery practice 3774
nutrition 4015, 5069
plantations in
Czechoslovakia 426
Great Britain 2135 2876
Iceland 6779
Norway 5453
plantations on
peat 2281
pseudogleys 3835
planting in slash 2258
planting stock 3810
propagation, vegetative 3790
provenance
trials 3522
regeneration 20, 5249
seed(s)
diseases 826, 3749
ripening and germination 2034
seedlings 5249
silviculture 388
site quality 1765
slash disposal 2258
soil(s),
effect on 5281
water relations 3835
hydrological 1783
wind resistance 4001
wood
anatomy 1887, 2876
Picea sitchensis — cont.
boat timbers p. 201 (Australia)
chemistry 6383, 6404, 6744
corrosive effects 6404
defects 1887
density 1887, 6333, 6417
preservation 6547
physical and mechanical properties 1258
properties and uses 4493
pulp and pulping 4790, 4793, 6695
variation with genetic and growth factors 1887
wood wool 6702
P. smithiana (P. morinda) 138, 1523, 3085, 3559, 5192, 6692
Picrasma 1948
Pinaceae 3466, 5125
Pinus 200, 5125, 5129, 5213
Pinus spp.
burning, controlled 2099
chemical constituents 200, 1029, 5066, 6028
cleanings 5627
cones 5213
diseases and disorders 5820
cone rust 2575
dieback 854
foliage 2554, 2556, 2558, 2565, 4145, 5891, 5893
root & butt 846, 2526, 4104
seed & seedling 824, 854, 2504, 5820
stem rust 864, 2535, 2541, 2575, 5874
distribution 200
ecology 200
economics 6199
embryology 5137
fertilizers 5613
fire control 2459
flowering 5138, 5497
fossil spp. 6384
genetics/breeding 200, 1872, 1888, 1892, 2535, 5145-6
growth substances, effects of 5497
injury by
frost 5761
fumes 4018
insect pests
Col. 1014, 1024, 1029, 2658, 2664, 2667, 4247, 4256, 6023, 6028, 6040
Hem. 4187, 5945
Hym. 905, 1024, 4282, 6051
Lep. 905, 953, 967, 988, 2640-1, 4233, 5972-3
litter/humus 3276
mycorrhiza 5820
nursery practice 3761
palaeoecology 200
physiology 200
plantations in
Argentina 1716, 2857
Brazil 1665-6
Cameroun 2148
Madagascar 2148
Queensland 3661
S. Africa 2148
planting stock 5574
pollen 1872, 3393
pollination 1888
propagation, vegetative 523
radio-isotope accumulation 84
Pinus spp. — cont.
reproductive behaviour 200
resin 1644, 2983, 3379
seed
fungi on 2504
sorting 3734
seed orchards 5491
seedling(s) 2199
shoot apex, anatomy 5129
soil
fauna 6062
spacing 5574
taxonomy 200, 5125, 5204, 5213
weed control 3849
wood
anatomy 1235, 2904, 6290
chemistry 1317, 1336, 2981, 2983, 6290, 6384
decay 3084, 4104, 4735
preservation 6548, 6553
sleepers 6553
stain 4719
P. albicaulis 1938, 4587
P. aristata 3371, 3561, 5331, 6156
P. attenuata 104, 168, 242, 4798
P. attenuata & P. radiata 167, 5187, 5477
P. banksiana
allelopathic effects on 2016
bark 3162
chemical constituents 3162
control, chemical 630
diseases and disorders 871, 1070, 2509-10, 3450, 5170, 5880
fertilizers 3868
foliage
effects on entompathogenic bacteria 4182
moisture 5170, 5783
forest types 3639
frost resistance 5170
genetics/breeding 460, 1891, 3402, 3417, 5185, 5214
increment and yield 2262
injury by
deer 1812
frost 3868, 5170
fumes 5767
nematodes 1070, 6060
radiation 4029
insect pests 923, 936, 1052, 2607, 2626, 4195, 4247, 5966
logging 2398, 3966, 5434
nutrition 3268, 3538
palaeoecology 5214
physiology 3538
planting stock 2255, 3796-7
provenance 1891, 3417, 5170, 5185
radiation, effects of 4028-9
regeneration 794, 5434
natural 5312
seed
germination 2016
radiation & thermal effects on 4028-9
treatment 3751
silviculture 3650
soils, effects on 3262, 3268
sowing, direct 549
spacing 2262
thinning 2316
variation 1891, 3417, 5185
water relations 5170, 3262
hydrological 3262
weedkillers, effect of 630, 2270

Pinus banksiana—cont.
wood
chemistry 6379-80
pulp and pulping 6700
strength properties 6350
P. banksiana & P. contorta 460
P. brutia 263, 524, 3379, 3730
P. brutia var. pyramidalis 3467
P. canariensis 988, 2148, 2861
P. caribaea
allelopathic effects on 3697
diseases and disorders 5811, 5826, 5902
genetics/breeding 1893, 3419
increment and yield 3704
injury by
mistletoe 5811
mycorrhiza 1990
nursery practice 5826
nutrition 261
plantations in
Argentina 5466
Cameroun 2148
Ceylon 436
Guyana 3704
India 1937
Madagascar 2148
Malaya 3699
Queensland 3419
Republic of Congo 6682
Venezuela 2155
provenance
trials 1893, 3419
variation 1893, 3419
wood
properties 1893, 3419
pulp & pulping 4796, 6682, 6684
P. caribaea var. bahamensis 1893, 3419
P. caribaea var. hondurensis (P. hondurensis) 436, 568, 1893, 3419, 3697, 5467, 5547, 5597
P. cembra
diseases 3504
distribution 3504
forest types 390, 3630
increment and yield 2074, 3504
injury by
frost 4010
fumes 5767
snow 4010
mycorrhiza 286, 2074
nursery practice 286, 2205
physiology 102, 1846, 5101
regeneration 390
natural 2039, 3504
root respiration 1846
seed
dispersal 2039
production & germination 3504
silvicultural characters 3504
stem form 3504, 4010
water relations
hydrological 2074
wood
decay 4735
P. clausa 170, 5169
P. contorta (incl. P.c. var. latifolia)
bark 3163
chemical constituents 1336, 3163
diseases and disorders 863, 865, 2558, 4079, 5972
economics 2757
fertilizers 2282
Pinus contorta—cont.
fire
danger 2446-7
forest types 5393
frost resistance 4015
genetics/breeding 460, 4964, 5214
increment and yield 1131, 2320, 2757 5464-5
injury by
deer 4079
frost 3523, 4015
mistletoe 5806
wind 4003
insect pests 1019, 4079, 4207, 4284, 6048
light relations 2244
nursery practice 542, 3774
nutrition 4015
palaeoecology 5214
plantations in
Argentina 5464-5
Great Britain 2876
plantations on
peat 5611
planting stock 543, 2244
provenance trials 5472
pruning 2320, 5644
regeneration
artificial 4259
natural 409, 3901, 5437
resin 1336
seed
dressings 3748
pests 4284
site quality 1111
slash weight 2446-7
soil requirements 265, 5393
spacing 5465
stand
models 4404
succession 5342, 5393
tending 5465
thermal relations 3523
underplanting in Aspen 543
variation 265
water relations, hydrological 5037
weedkillers, effect of 2222
wood
anatomy 2876
chemistry 1336
defects 1560, 5806
drying 3113, 6640
grading 6345, 6355
poles 1560
properties and uses 4494
stain 4261
strength properties 6355
wood wool 6702
P. coulteri 104, 242, 1336, 2247, 2559, 5263
P. cubensis 1893
P. densiflora
bark 6743
chemical constituents 2045, 6743
diseases and disorders 874, 4149
fertilizers 2177, 4605, 5496
genetics/breeding 3754, 5171
increment and yield 260, 4605
injury by
fumes 4024
light relations 1953, 3606
measurement
tree and stand 1086
Pinus densiflora—cont.
nutrition 260, 5065
physiology 5121
plantations on
eroded slopes 5590
pollination 163
propagation
grafting 534
seed
chemical constituents 2045
germination 312, 3744, 3754
testing 3754
treatment 2187, 3744
seed orchards 2177, 5496
shoot development 5130
soil
fauna 5024
thermal relations 3606
wood
anatomy 4605, 6294, 6298
chemistry 1324, 2980, 4605, 6408-9
density 4605
improved wood 6565
permeability 2946
preservation 1511
variation with growth factors 4605
working properties 1383
P. densiflora × P. thunbergii 1914
P. douglasiana 2148
P. durangensis 6161
P. echinata
bark 525
browse plants 5061
competition 5585
cone
harvesting 3732
diseases and disorders 866
economics 1175-6
fire danger 5780
genetics/breeding 5186
increment and yield 5588
injury by
deer 1811
rats 4165
insect pests 954, 5958, 6020
measurement
tree and stand 2712
mixtures 5585
mycorrhiza 2502
nursery practice 3532
nutrition 5587
plantations
effect on natural succession 345
plantations in
Oklahoma 2130
plantations on
sandy soils 2130
spoil mounds 5585, 5587
propagation by grafting 536
seed
dispersal 5311
production 5489
storage 488
site quality 6134
thinning 5782
underplanting 5587
understorey
removal 5646
water relations 252, 6314
hydrological 5034
weed control 3882
weedkillers, effect of 622, 3882

Pinus echinata—cont.
wood
anatomy 6278
density 2956
extractives 2956
moisture relations 6314
wood-wool/cement 1365
P. edulis 1069, 2583, 5396, 5513, 5872
P. eldarica 2141, 2199, 3696
P. elliottii
cone, harvesting 3732
diseases and disorders 2504, 4108, 4115, 4139, 5879
economics 4907
fertilizers 510, 2207, 3863, 3865, 5495, 5597, 5621
flowering 5495
genetics/breeding 170-1, 190, 1893-5, 2173, 3405, 3419, 5158-9, 5163, 5186, 5659
growth substances, effects of 120
increment and yield 2273, 3863, 5468
injury by
fire 2471
hail 757
nematodes 6066
radiations 4025, 5775
rats 4165
insect pests 2610
mycorrhiza 287, 6066
nutrition 250, 261, 476, 5267
phenology 1893, 3420
physiology 3387, 5158, 5775
plantations in
Argentina 5466, 5571
Brazil 440-1, 1113
Ceylon 436
Malawi 3405
Queensland 3419, 3885
planting
methods 5571
season 2263, 5571
site preparation 476
planting stock 287, 3814, 5571
pollination 3731
propagation, vegetative 526, 536
provenance trials 451
pruning 2319, 3885
radiation, effects of 4025, 5775
resin-tapping 656, 3918, 5659
seed
production 5659
storage 488
testing 500
treatment 490, 3741
seed orchards & seed stands 2173, 3731, 5659
site quality 3830, 4357
spacing 569, 2273, 3830
stand density 2273, 3863
stem form 1894
thinning 569, 616, 3865, 3885, 4108, 4115, 5631-2
water relations 6314
wood
anatomy 1894, 2895, 5158, 6283
defects 1894, 6669
density 1894, 2956
extractives 2956
gluing 4636-7, 4639-40
moisture relations 6314
pulp & pulping 2895, 4797, 6283, 6698
variation,
genetic 1894
Pinus elliottii × P. clausa 170
P. elliottii × P. taeda 1896
P. elliottii var. densa 3642, 5315, 5466
P. engelmannii 6161
P. excelsa see P. wallichiana
P. flexilis 3561, 5872
P. gerardiana 3559
P. glabra 483, 488-9
P. griffithii see P. wallichiana
P. halepensis
dendrochronology 4385
diseases and disorders 860, 2533, 5825
injury by
radiations 4026
insect pests 988, 2657
leaves, anatomy 5263
measurement tables
volume 1095
nursery practice 5825
phenology 2141
physiology 1841, 5105, 5263
plantations in
Morocco 5596
propagation by grafting 524
radiation, effects of 4026
resin 5105
root
growth 295, 5263
water relations 1841, 5263
wood
pulping 1580
small-wood utilization 1580
P. halepensis var. brutia see P. brutia
P. hartwegii 2075
P. hondurensis see P. caribaea var. hondurensis
P. humboldtiana 2148
P. insignis see P. radiata
P. insularis see P. khasya
P. jeffreyi
chemical constituents 1336
injury by
mistletoe 2493
insect pests 4414, 6001
physiology 5263
planting stock 5567
resin 1336
water relations 5263
wood
anatomy 6321
chemistry 1336
shrinkage and swelling 6321
P. jeffreyi × (P. jeffreyi × P. coulteri) 167
P. khasya (incl. P. insularis)
chemical constituents 6760
distribution 1936
genetics/breeding 3404, 5156
increment and yield 3709
nutrition 261
phenology 3404
plantations in
Brazil 567
Cameroun 2148
Ceylon 436
Madagascar 2148, 6682
Zambia 3709
provenance 1936, 3404, 3709
resin 6760
seed
collection 1936
silvicultural characters 1936
spacing 567
variation 3404, 5156
Pinus khasya—cont.
wood
defects 2921, 5156
density 5156
durability 1369
pulp & pulping 6682
variation 3404, 5156
P. koraiensis 534, 874, 1086, 1132, 2230, 2430, 3587, 5375
P. lambertiana 104, 242, 499, 869-70, 2043, 3592, 4089, 4143, 5264, 5885
P. leiophylla 2148, 6161
P. leucodermis 94, 5235
P. longifolia see P. roxburghii
P. luchuensis 2895
P. massoniana 6145
P. merkusii 1369, 1936, 2148, 2715
P. michoacana 2148
P. monophylla 5872
P. montezumae 880, 1915, 5539, 5824
P. monticola
diseases and disorders
stem rusts 869, 2537-9, 3540, 2539, 2540, 4142, 5449, 5872, 5881, 5883
genetics/breeding 165
histology, tissue culture 5881
litter/humus 39
management 6184
phenology 3418
pollen 1873
variation 3418
wood
market trends 1197
properties & uses 1212
P. monticola × P. strobus 167
P. morrisonicola see P. parviflora
P. mugo 94, 1126, 1846, 1949, 2554, 3349, 3468, 6060
P. mugo var. mughus 240, 2071
P. mugo var. pumilio 240, 6762
P. mugo vars. rostrata, rotundata & uncinata see P. uncinata
P. mugo × P. sylvestris 3468
P. muricata 168, 2230, 4144
P. muricata var. cedrosensis 4144
P. murrayana see P. contorta
P. nigra
barking 3946
chemical constituents 94
crown
dimensions 2754
form 6159
diseases and disorders 878, 2554, 2558, 2560
foliage weight 6761
forest types 5367
increment and yield 1080, 2744, 2754
injury by
ice 4009
insect pests 6046, 6049
measurement
stacked wood 6123
tables
volume 1095, 2713
nycorrhiza 5524
nursery practice 3776, 5518, 5524
oils 6761
physiology 653, 3776
plantations in
Italy 396
Rumania 1080, 3798
Turkey 3844

Pinus nigra—cont.
plantations on
sands 3843, 5299
planting
methods 3843
site preparation 396
planting stock 3798
propagation, vegetative 2230
resin-tapping 653
root(s)
growth 5299
seed
cleaning and sorting 3733
soil
flora 5023
soil requirements 3764, 5518
varieties 162
weedkillers, effects of 2222
wood
anatomy 2908
properties and uses 1210
pulp and pulping 1580
small-wood utilization 1580
P. nigra var. austriaca
chemical constituents 162
diseases and disorders 4121
fertilizers 162
genetics/breeding 156
injury by
fumes 4024, 5767
insect pests 4209
leaves, anatomy 162
nursery practice 3750
nutrition 162, 2433, 3546
pollen 156
production, biological 3602
resin-tapping 3915-6
silvicultural characters 233
soil requirements 233
water relations 3550
wood
decay 4735
P. nigra var. calabrica
(P. n. var. corsicana, P. n. var poiretiana)
chemical constituents 162, 5852
diseases and disorders 1076, 4105, 5852-3, 5864
fertilizers 162, 1751
increment and yield 5630
injury by
frost 162, 4987
insect pests 4209
leaves, anatomy 162
light relations 5852
litter/humus 1751
nursery practice 519, 541
nutrition 162
phenology 2141
planting stock 541
root system 1998
silvicultural characters 233
soil fauna 5022
soil requirements 233
thinning 5630
water relations,
hydrological 1783
wood
bleaching 3080
defects,
spiral grain 2918
drying 1541
poles 2918
stain 3080
wood-wool 6702-3
Pinus nigra var. caramanica (P. n. var. pallasiana) 162, 2141, 2626, 3730, 5935
P. nigra var. cebennensis 162, 535
P. nigra var. corsicana see P. nigra var. calabrica
P. nigra var. pallasiana see P. nigra var. caramanica
P. nigra var. poiretiana see P. nigra var. calabrica
P. nigra var. pyrenaica 162
P. nigra var. salzmannii see P. nigra var. cebennensis
P. oocarpa 880, 1937, 2148, 5466, 6682
P. palustris
burning, controlled 2129, 3342, 4091
browse 3342
chemical constituents 2044
cone crops 5495
harvesting 3732
diseases and disorders 832, 3779, 4091
fertilizers 3590, 3865, 5495
flowering 3421, 3590, 5495
genetics/breeding 1894, 5186
increment and yield 3840
injury by
grazing 884
radiations 4025
insect pests 999, 2610, 5955
nursery practice 3779
plantations in
Argentina 5466
plantations on strip-mined land 3840
planting stock 3799
provenance trials 832, 3421
radiations, effects of 4025
regeneration,
natural 2129
resin-tapping 656, 3918
seed
chemical constituents 2044
germination 5510
storage 487
treatment 5510
stem form 1894
thinning 3865
tissue cultures 5193
water relations 6314
wood
anatomy 1894, 6278
decay 4735
defects 1894
density 1894, 2956
extractives 2956
moisture relations 6314
variation,
genetic 1894
P. parviflora var. pentaphylla (P. pentaphylla) 2149
P. patula
chemical constituents 1816
diseases and disorders 761, 5893
genetics/breeding 3404-6
increment and yield 2149, 3406, 6089, 6145
insect pests 2675
light relations 5539
measurement tables
volume 2714
tree and stand 2149
nursery practice 5539
nutrition 261, 761, 1816
Pinus patula—cont.
plantations in
Argentina 5466
Cameroun 2148
E. Africa 2149
India 1937, 6145
Madagascar 2148, 6089, 6682
Malawi 3405, 3682
Swaziland 6682
propagation, vegetative 2230
pruning 2319
soil
fauna 49
thinning 2310, 5629
wood
anatomy 2900
defects,
spiral grain 2921, 6658
painting 4665
preservation 4665
pulp and pulping 6682
variation 3404
P. patula × P. radiata 168
P. pentaphylla see P. parviflora var. p.
P. peuce 30, 94, 1890, 2230, 2235-6, 3402, 4735, 5235, 6762
P. pinaster
chemical constituents 93-4, 3377, 3447, 5071, 6028
conversion of overdense stands 2118
diseases and disorders 1689, 2534, 2554, 5825, 6068
ecology, general 3505
fertilizers 562, 2112, 2289
fire control 788
fire-regenerated stands 2118
forest types 788, 3505
genetics/breeding 5157
increment and yield 6147
insect pests 1077, 2642, 2657, 3917, 5955-6, 6028, 6068
nursery practice 5825
phenology 2141
physiology 3377, 3447
plantations in
W. Australia 3528
planting
site preparation 562
planting stock 562
propagation, vegetative 524
provenance 3651
pruning 562, 2319, 2756
resin 3917
silviculture 562, 2112, 2756, 3651
site quality 3505, 4360
soil cultivation 562, 2756
soil requirements 3528, 4360
sowing, direct 562
thinning 562, 2756
wood
anatomy 4608
chemistry 1328
density 4608
flooring 1454
preservation 1483
properties and uses 1210
pulp and pulping 1580, 3139, 4608
small-wood utilization 1580
variation within tree 4608
P. pinea
aerial photography 4406
chemical constituents 6028
diseases and disorders 4122, 5248
fertilizers 477

Pinus pinea—cont.
fire
control 788
forest types 788
increment and yield 6147
injury by
radiations 4026
insect pests 477, 1689, 4234, 4252, 5956, 6028
leaves, anatomy 5263
light relations 5248
measurement tables, volume 1095
nut production 4252
nutrition 5248
phenology 2141
physiology 5071, 5263
propagation, vegetative 477, 524, 2230
pruning 477
radiation, effects of 4026
seed supply 477, 3730
site quality 6131
water relations 5263
wood
properties and uses 4490
P. pithyusa 2141, 2199, 2554, 4175
P. ponderosa
bark 3162, 6083
bibliography 3469
burning, controlled, 3880
chemical constituents 3162
diseases and disorders 865, 1069, 2527, 2558, 2560, 4106, 4140, 5652, 5872-3, 5888
drought resistance 3539
fire-regenerated stands 3660
genetics/breeding 166
grazing under 2332
increment and yield 820, 6148, 5464
injury by
frost 3523
mistletoe 820, 2492, 2493, 4072, 5807-9
nematodes 1069
rodents 2582-3
silting 4012
insect pests
Col. 1011, 1017, 1025-6, 2660, 4257-8, 4414
Hem. 936
Lep. 951, 4207, 4210, 5652, 5990
litter/humus 39, 5004
logs,
grading 1567
management 6148
measurement,
tree and stand 2707, 2719
mycorrhiza 1069
nursery practice 514, 2221, 3776, 4012
nutrition 266, 3539
physiology 1850
plantations in
Argentina 5464
Oklahoma 2130
Rumania 3798
plantations on
sandy soil 2130
planting stock 3798, 5563, 5567
provenance
trials 447
regeneration, natural 2130, 3341, 3660, 5436

Pinus ponderosa—cont.
root
growth 121, 2221
root system 294
seed(s)
testing 499
treatment 5513
shelterbelts 5652
fauna 3307
requirements 266
sowing, direct 2248
stem form 3596
thermal relations 248, 3523
thinning 3880
variation,
ecotypic 266
water relations 3539, 4609, 5264
hydrological 5038
weedkillers, effect of 5800
wood
anatomy 4609
chemistry 6376
decay 4106
defects 1557
drying 4763
fireproofing 3075
painting 6490
screw-holding properties 2969
veneer 1567
P. ponderosa var. scopulorum 2492
P. pseudostrobus 1915, 1937
P. pseudostrobus var. oaxacana 5316
P. pumila 5308, 5376
P. pungens 2230
P. radiata
bark 3163
barking 2366
chemical constituents 3163, 5072
diseases and disorders
bibliography 506
dieback 4122, 4335
foliage 2555, 2557, 4144-6, 5817, 5888-90, 5893
nutrient deficiency 761
seedling 829, 4084-5, 5825
wilt 1046, 4275, 6045
fertilizers 2206, 2289, 3765, 3862, 5269
genetics/breeding 168, 3406, 4525, 5187
growth substances in 122, 5108
increment and yield 1133, 2149, 2320, 3406, 3552, 4929, 5464, 5583
injury by
fire 5790
mistletoe 5809
insect pests
Col. 1028
Hem. 4275-6
Hym. 1045-7, 3533, 4275-8, 6043-5
Lep. 2639
leaves, anatomy 5194, 5263
litter/humus 5005, 5016-7
logging 2729
logs
grading 6654
protective treatment 5699
storage 5699, 6650
measurement
tables
volume 2714
tree and stand 2149, 4335
mycorrhiza 1983-5, 3562-3, 5289, 5525

Pinus radiata—cont.
nursery practice 506, 3756, 5516, 5525, 5825
nutrition 761, 5090, 5268
phenology 329
physiology 122, 5090, 5108, 5263
plantations in
Argentina 5464
Australia 581, 3552, 3662
Cameroun 2148
Chile 4929
E. Africa 2149
Italy 5583
planting
methods 3826
site preparation 795
planting stock 3820, 5609
propagation, vegetative 524, 2229-30, 5541, 5564
pruning 2319-20, 4671
root(s)
excretion by 5090
seed
chemical constituents 5072
treatment 2181
site quality 4361, 6654
soil
fauna 49
soil requirements 3265, 5269
sowing, direct 2118
spacing 4671
stand structure 229, 3406
stem form 4335
thinning 632, 3969, 4671, 5629
water relations 23, 5194, 5263
hydrological 3265
weed control 586, 5532
weedkillers, effect of 2222, 4057, 4059, 5532
wood
anatomy 1247, 4509, 6283, 6288, 6293
chemistry 4275, 4533, 6045
chips 6651
cooperage 4684
decay 1539, 4735, 4741, 5790
spiral grain 2918-9, 4525, 6658
density 2949, 6293
drying 1540
durability 4738
grading 1302-3
moisture relations 1278, 3533
painting 4665
physical and mechanical properties 6342
poles 1540, 2918
posts 1539-40
preservation 1474, 1489, 3058-9, 4665, 4698
pulp & pulping 6283, 6651, 6697
sawmill studies 4671
shrinkage 1283
stain 1028, 1539, 5790
storage 5699, 6650-1
strength properties 4698, 6342
P. radiata var. binata 4144
P. resinosa 6064
bark 3162
cambial activity 6280
chemical constituents 3162, 4086, 5067
chemical control 630
cone crops 5488
diameter variation 132

Pinus resinosa—cont.
diseases and disorders 1070, 4086, 5827, 5867
fertilizers 478, 603, 760, 2060, 6155
fire behaviour & control 2456, 2468
foliage
moisture 5783
genetics/breeding 3416
increment and yield 1122, 1963, 2262, 2059, 3840, 5578, 6132, 6149, 6155
injury by
fire 5791
hail 5763
nematodes 1070, 6060
salt 4014
insect pests 936, 953, 1001, 4247
leaves, morphology 4005
light relations 302
logging 2398, 3966
measurement
tables
assortment 6115
yield 5578
tree and stand 2711, 6129
mycorrhiza 2003
nursery practice 2202, 2218, 3752, 5552
nutrition 118, 760, 4064, 5067
physiology 117-8
plantations on strip-mined land 3840
planting stock 555, 560, 3796, 5553
provenance
trials 452, 3415
propagation, vegetative 535
root(s)
measurement 3566
growth 2003, 5295
seed
production 478
treatment 3751-2
shoot growth 118, 1122
site quality 2748, 4358, 5578, 6132
sowing, direct 3804
spacing 2262, 5578
stand
structure 6149
thinning 2060, 3262, 5578
underplanting in brush 302
water relations 132, 302, 1963, 2060, 3262
hydrological 61, 3262
weed control 623, 5534
weedkillers, effects of 804-5, 2270, 2481, 4060-5, 5534, 5801
weight, tree 6129
wood
anatomy 3415, 6280
chemistry 2981
density 1298, 3415, 6129
grading 6349
painting 6490
P. rigida 169, 534, 1086, 4030, 4735, 4982, 5585, 5590
P. × rigitaeda (P. rigida × P. taeda) 1243
P. roxburghii (P. longifolia) 190, 1123, 1523, 2920, 3559-60, 3613, 5526, 6543
P. sabiniana 524, 936, 2559, 4798, 6028
P. salzmannii see P. nigra var. cebennensis
P. serotina 169, 5215, 6278
Pinus sibirica
diseases and disorders 838, 875
distribution 3694
game management 79
increment and yield 1079, 2765, 4397
insect pests 2678, 4203
measurement
tables
assortment & volume 4311
physiology 3364
plantations in
U.S.S.R. 3694
plantations on
bogs 573
propagation, vegetative 2236
regeneration, natural 395
resin-tapping 2339-40
seeds
production 3586
soil
fauna 55
stand structure 1079, 2787
succession 343
P. sosnowskyi 3631, 4175, 5373
P. 'southern'
cone
harvesting 3732
diseases and disorders 2522, 4108
fire control 5045
increment and yield 3840
insect pests 1012-3, 2659
logging 5045
plantations on
erosive soils 5045
strip-mined land 3840
wood
laminated 1438
nail-holding properties 4632
piles 6496
preservation 1475, 6496
pulp & pulping 1575, 4797, 6698, 6678
small-wood utilization 6678
strength properties 4787
veneer 4656, 4675
P. stankewiczii 2141
P. strobus
bark 3162
cambial activity 6280
chemical constituents 1821, 3162
competition 585
control, chemical 2420
diseases and disorders
foliage 2553, 2565, 4079, 4147, 6069
root & butt 4106
stem rust 867-8, 2535-6, 4079, 4141, 5882, 5884
economics 118[illegible]
fertilizers 52[illegible]569
flowering 2178
moisture 5783
forest types 5346
genetics/breeding 3402
increment and yield 2061, 2744, 3686, 5457
injury by
deer 4079
hail 5763
hares 4166
ice 4009
salt 4014
wind 5756
insect pests 936, 966, 1003, 2653-4,
Pinus strobus—cont.
4176, 4247, 4249-51, 6011-2, 6041
light relations 3366
mixtures 5585
mycorrhiza 1982, 1988-9
nursery practice 5553
nutrition 2061, 3366
phenology 5332
physiology 1846, 3297, 3366
plantations in
Czechoslovakia 426, 2138, 3686
Illinois 3809
Japan 5457
Rumania 429
plantations on
heathland 5569
spoil mounds 5585
planting
methods 3809
site preparation 5569
planting stock 555, 3796, 5553
propagation, vegetative 2178, 2226, 2230, 2237
provenance
trials 5473
pruning 635
regeneration, natural 5610
root
respiration 1846, 3297
seed
sorting 3734
storage 488
shoot growth 1854, 3380, 5332
site quality 4359
soil
fauna 53
sowing, direct 3804
stand
structure 5346, 5457
thinning 624-5
water relations 3262
weed control 623, 2482, 5534
weedkillers, effects of 625, 5534
wood
anatomy 2910, 4513, 4517, 6277, 6280
borers 1524
chemistry 2910
decay 41[illegible]6, 4735
drying 3107
gluing 6466
improved 3062, 6466
moisture relations 4568
painting 6490
properties and uses 1212
strength properties 4568
P. sylvestris
aerial survey 4413
age determination 2750
allelopathic effects 2012-5, 5302
bark 158, 1090, 2701, 4303, 6090
barking 3946, 6117
chemical constituents 94, 114, 1820, 1827, 20[illegible]4, 2278, 2375-6, 2985, 3345-8, 3938, 4581, 5115, 6020-8
christmas trees 5475
cleanings 61[illegible], 5626
conversion of stands 2117, 5370
crown
dimensions 2754, 4342
form 5166-7, 6159
weight 4352
diseases and disorders 1834, 2497, 2501, 5754, 6850

Pinus sylvestris—cont.
canker 861, 2546, 5864
foliage 878, 2561-5, 4147, 5754, 5828
dieback 853, 4291
nutrient deficiencies 762, 4291, 5248
root & butt 847, 4103, 4105, 4117, 5836-7, 5841, 5851
seedling 830-1, 1070, 4087-7, 4291, 5754
stem rot 2523, 4110, 5846
distribution 360, 2073, 3612, 5235-6
drainage, effect of 591-2, 2278, 6203
ecology, general 1939, 3530, 5236
economics 2821, 6176, 6201
fertilizers 293, 513, 577, 599-602, 2283-9, 3303, 3860-1, 4177, 5296, 5520, 5619-20, 6850
fire
control 4048
resistance 4044
flowering 2031, 5236
foliage
chemical constituents 2375-6, 3345-8, 3938, 4044, 6761
flammability 4044
utilization 2375-6, 3938
weight & volume 160, 4347, 6761
forest types 357, 360, 362, 367, 650-1, 3601, 3627-8, 5235-6, 5370
frost resistance 114
fruiting 2031, 5493
genetics/breeding 154-6, 479, 1867, 3468, 5185, 5235, 5660
growth substances, effects of 2274, 3746
growth substances in 1834, 1855, 5115
increment and yield 1080, 1962, 2061, 2140-2, 2309, 2679, 2744-5, 2754, 2768-9, 3193, 3374, 4371, 4379-80, 5235, 5441, 6150, 6163, 6203, 6850
injury by
browsing 5911
deer 1809, 4079, 4169, 5911
frost 2426, 5759
fumes 592, 767, 1075, 2439-40, 4020
ice 4009
insolation 5248
mistletoe 5809
nematodes 1070, 6060
radiations 4028, 5774
toxic soil constituents 2432
wind 5756
insect pests 4177, 5236, 5754, 5926, 5935, 6850
Col. 1039, 4210, 4247, 4253, 4264, 5754, 6014, 6026-8
Dipt. 853, 5754
Hem. 924, 938, 2353, 2611, 4186, 5935
Hym. 157, 2440, 2677, 2679, 5754, 6052
Lep. 963, 972, 2440, 2624, 2626, 4202-3, 4208-9, 4220, 4227, 5754, 5957, 5983-4
leaves, anatomy & morphology 160-1, 1859-61, 3345, 3468
interplanting in Aspen 5418
lupins 583
light relations 159, 1737, 1889, 3520, 5164-5, 5235, 5248

Pinus sylvestris—cont.
litter/humus 2012, 2015, 2058, 3277, 3294, 3300, 3627, 4048
logging 2833, 3960, 5401
logs
protective treatment 1550
storage 3095, 4747
management 13, 1809, 2809, 4424, 5401, 6176-7, 6190, 6850
measurement
stacked wood 2734, 6117, 6123-4
tables
taper 4306
volume 1081, 1091, 1095, 2702, 4311, 4314, 6090
yield 1080-1
tree and stand 1088, 1091, 4307, 6080, 6090, 6177
microclimate 21, 5235
mixtures 5598
mycorrhiza 1834, 1991-4, 2214, 2501, 2565, 3558, 5235, 5524
nursery practice 513, 518, 803, 2216, 3770, 3775, 5524, 5536, 5552, 5828
nutrition 1834, 1968-70, 2058, 2061, 2214, 2217, 2278, 2433, 2439, 3267, 3345-7, 3546, 3861, 4177, 5235, 5248, 5265, 5616, 6850
oils 6761
palaeoecology 3612
phenology 1855, 2235, 3422, 5236, 5260
physiology 1834, 5236
cell wall 4505
photosynthesis & respiration 1840, 1846, 1849, 1889, 3372, 3374, 5164-5, 5235
reserves 113-4, 2278, 4177, 5093
translocation 1842, 3347, 5093
transpiration 253, 1840, 3365, 5098
tropisms 159
plantations in
Rumania 1080
U.S.S.R. 419, 3807
plantations on
eroded sites 3798, 3844
farm land 3806
lake sediments 2002
peat 572-3, 2000, 3836, 5582, 5612
sands 577, 2142, 3724
strip-mined land 3837, 5586
planting 5401, 5432
in slash 2258
methods 3806-7, 5570
season 3808, 5582
site preparation 2258, 3724, 3807
planting stock 2250, 2254, 3798, 3808, 5552
pollen 155-6, 2358, 3395, 5115; p. 201 (Germany)
production, biological 2057, 2128, 3601, 5250, 5326
propagation, vegetative 535, 2230, 2235-6, 3372, 5235
provenance 159-61, 1834, 1889, 3374, 5164-6, 5235, 5503
trials 157, 160-1, 2159, 2167-8, 3422, 3710-4, 4303, 5235, 5474-5
pruning 3887-8, 5643, 6202
radiation, effects of 4028, 5771, 5773-4
regeneration
natural 2128, 3321, 5401, 5432

Pinus sylvestris—cont.
resin 1620, 4177, 5093, 5935
resin-tapping 652, 655, 2341-2, 2344-8, 3911-6, 5168, 5660-6
resources in E. Germany 3193
root(s)
growth 293, 2000-1, 5235, 5260, 5296
respiration 1846
root system 293, 2001-2, 3568-9, 5296
salt tolerance 3545
sap flow 1842
seed
certification 3730, 5503
chemical constituents 2044
cleaning 3733-4
germination 2013, 3738, 3745, 5314
production 2032, 3589, 3730, 5485, 5493
quality 3589, 3775
radiation, effects of 4028, 5771, 5773-4
storage 2184, 3738, 5773
testing 2193, 3755
thermal effects on 4028
treatment 2186, 3746
seed orchards & seed stands 481, 2179, 3730
seedling growth & development 2012-4, 2046, 2214, 3520, 5314, 5520
shelterbelts 5608
silviculture, general 13, 5401, 6850
site quality 4356, 5235, 5265, 6133
slash disposal 2258
soil(s)
bactericidal activity 3294
effects on 35, 3274
fauna 3303
flora 43, 2214
trace elements 3269
soil requirements 3568
sowing, direct 5432, 5576-7
spacing 566, 3828, 5576-7
stand structure 1141, 2790, 3374, 5497, 5150
stem form 2702, 3423, 6090
success[illegible]536
thermal relations 5260
thinning 253, 318, 610, 614, 2305-6, 2309, 2375, 2378-82, 3960, 5401, 6201
tissue culture 1907
tree classes 1842, 3374
turpentine 3171
valuation tables 2824
variation 159-61, 1834, 1889, 2790, 3374, 3456, 3911, 5164-8, 5185
water relations 253, 1834, 1840, 1962, 3365, 3531, 3568, 4177, 4505, 5098
hydrological 34, 60, 1783, 3321
weed control 803, 5401, 5481, 5531, 5536, 5533, 5576, 5608
weedkillers, effects of 4058, 5481, 5531, 5533, 5536
wild life, game birds 1806
wind speed in stands 21
wood
acoustic properties 4534
anatomy 1236, 1832, 2907-9, 2977, 4505, 4516-7, 4606, 4780, 6291, 6674

Pinus sylvestris—cont.
borers 1524-5, 1525, 3935, 4747, 6003
branchwood utilization 3938
chemistry 1337-8, 2977-8, 2981, 3347, 3938, 4581, 6304, 6310, 6404
constructional timber 4679
corrosive effects 6404
decay 1507, 1509, 4735, 5843, 6568, 6585-6, 6598
defects 1104
density 1295, 1542, 2954, 3330, 4556
drying 1542, 4764-5
durability 6568
extractives 1620, 3938
fibreboards 3147
fireproofing 3077
hydrolysis 4823-4, 6727
improved 4710, 6304, 6567-8
mine timbers 4668
moisture relations 4542, 4567, 6304
particle board 1598-9, 3077, 6718
permeability 6326
physical and mechanical properties 4780, 6598, 6850
piles 6586
plywood 4678
poles 4704
preservation 1476, 2384, 4694-6, 4704, 6544, 6546, 4549, 6555, 6567
pulp & pulping 1106, 1337-8, 1580, 3095, 3147, 4790
quality in general 2347, 6202, 6653
radiation, effects of 1509, 6304
resonance wood 4534
shrinkage and swelling 4550, 6304
small-wood utilization 1580, 3938
stain 1550, 2384, 3935
steaming 3105
strength properties 2347, 4567, 4668, 4678, 4694, 6304, 6555
stumpwood utilization 1620
termite attack 6546
variation 4780
wood-wool 6702-3
P. sylvestris var. lapponica 5070
P. sylvestris var. uralensis 157
P. taeda
bark 525
browse plants 1813, 5061
burning, controlled 2471, 3672, 5793
competition 5585
cone
harvesting 3732
morphology 5215
diseases and disorders 848, 862, 2519, 4107, 5838, 5876-9
economics 1175-6
fertilizers 2290, 3864, 5597
genetics/breeding 169, 172, 1894, 1897, 3405, 5158, 5160-3, 5186, 5215, 6681
increment and yield 1964, 3840, 5588
injury by
deer 1811
fire 2471
radiations 5775
rats 4165
insect pests 936, 954, 2625, 4194, 4211, 6020

Pinus taeda—cont.
leaf
morphology 5215
light relations 1739
litter/humus 3278, 5003
mixtures 5585
mycorrhiza 1986, 2502
nursery practice 2196, 2203, 3532
phenology 1897
physiology 1897, 1986, 3387, 5106, 5158, 5162-3, 5775
plantations in
Argentina 5466, 5571
Malawi 3405
Oklahoma 2130
Queensland 3864, 3885
plantations on
road banks 2325
sandy soils 2130
spoil mounds & strip-mined land 3840, 5585
planting method 5571
planting stock 553, 1897, 3819, 5571
propagation, vegetative 536, 2230
provenance 173
trials 172, 453
pruning 3885
pruning, natural 2052
radiation, effects of 5775
regeneration
natural 410, 2130, 3672, 5793
resin 5106, 5215
root
growth 296, 1897, 1965, 2004
root system 297
seed
germination 5215
production 5489
storage 487
treatment 491, 3741, 3753
seed orchards 5494
seedlings 1965, 5215, 1897
site quality 6134
soil(s)
compaction, effects of 1965
flora & fauna 5279
sowing, direct 550
stem form 1894
taxonomy 5215
thermal relations 2004
thinning 1813, 3879, 3885
variation 172-3, 453, 1894, 1897, 5215
water relations 1897, 1964, 2901, 6314
weed control 3881
wood
anatomy 1894, 2886, 2901, 2943, 4607, 5158, 6278, 6293, 6322, 6625, 6681
chemistry 1894, 2943
decay 1365
defects 1894, 5161, 6668
density 1894, 2955-6, 5215, 6293, 6331, 6681
drying 3072, 6643, 6668-9
extractives 2956
improved 3068, 3072
juvenile 4607
moisture relations 6314
preservation 4702
pulp & pulping 2886, 4797, 5160, 6680-1, 6698
shrinkage and swelling 6322
steaming 6625

Pinus taeda—cont.
variation with genetic & growth factors 1894, 4607
veneer 6643
wood-wool/cement 1365
P. taiwanensis 2504
P. tenuifolia 2148
P. thunbergii
genetics/breeding 3754
injury by
fire 2018
fumes 4024
salt 264
insect pests 2643
plantations in
Japan 5590
plantations on
eroded sites 5590
sand dunes 3843
planting
methods 3843
propagation, vegetative 534
seed
chemical constituents 2044
germination 312, 3744, 3754
production 163
testing 3754
treatment 3744
stem form 324
wind, effects of 324
wood
anatomy 2895
pulp & pulping 2895
P. torreyana 3353
P. uncinata (P. mugo vars. rostrata & uncinata) 240, 3626
P. virginiana 996, 5330, 5585, 5799, 5872, 6314
P. wallichiana (P. excelsa, P. griffithii) 1663, 2230, 3559, 4831, 5068
P. washoensis 1336
Piptadenia falcata 1487
P. glandulifera & P. leucocarpa 4800
Piptadeniastrum africanum 1529, 4758
Pistacia spp. 1900
P. atlantica 5648
P. eurycarpa 205, 3477
P. khinjuk 333
P. lentiscus 5350
P. vera 551
Pithecellobium (Pithecolobium) dulce 4836
P. saman see Samanea s.
Pithecolobium see Pithecellobium
Pittosporum 1948
Pittosporum sp. 5522
P. tobira 5254
Platanus spp. 1921, 5197
P. acerifolia 3843, 6295
P. occidentalis 822, 2191, 3607, 4027, 4118, 4158, 5119; p. 783 (U.S.A.)
P. orientalis 204, 2928, 4016, 5113-4
Plathymenia foliolosa 5224
P. reticulata 1487, 5224, 6253
Podocarpaceae 5075, 5207
Podocarpus spp. 280, 1995, 2881, 2985, 3350, 4104, 4535, 5286
P. acutifolius 4585
P. amarus & P. blumei 1369
P. cupressinus see P. imbricatus
P. elatus 2986, 5076
P. ensiculus & P. gracilior 6252
P. imbricatus (P. cupressinus) 1369
P. macrophyllus 4025

Podocarpus neriifolius 1369, 6258
P. nivalis 4585
P. polystachyus 1369
P. salignus 1254
P. usambarensis 6252
P. vitiensis 6258
Polyalthia suaveolens 1945
Polygalaceae 5203
Polygonum sachalinense 2265
Pometia 1948
P. pinnata 6454-5
Populus spp. and hybrids
  bactericidal activity 1832
  bark 6687
  bibliography 3488-9
  chemical constituents 1829
  diseases and disorders
    bacterial 2545, 2547-9, 4132-3
    Braunfleckengrind 873, 4293
    canker 872-3, 1844, 2545, 2548-9, 4132-4, 4293
    foliage 824, 2545, 2548, 2569-72, 4151-2, 4157, 5404, 5900-1
    virus 4160, 5906
  fertilizers 606, 2210
  forest types 5347
  genetics/breeding 461, 463-4, 1829, 1900, 2571, 3421, 3431, 3435, 3491, 3719, 5478, 6340, 6687
  increment and yield 256, 461, 4397, 5479, 6153, 6340
  injury by
    frost 3835
    fumes 4018
    gall-forming pests 5755
    voles 4163-4
    wind 754
  insect pests 901, 2598, 4183, 5404-5, 5755
    Col. 998, 2598, 2646-7, 2649, 2651, 4242, 5949-50, 6000
    Hem. 2598, 5943
    Lep. 946, 2548, 2623, 2635, 4204, 4206, 5949-52
    Thysan. 4293
  leaf anatomy 226
  light relations 5259
  measurement
    stacked wood 1109, 6123
    tables
      volume & yield 6094
  nursery practice 2210, 4066-7, 5515
  nutrition 763, 2210, 2433, 2503, 3375
  phenology 5259
  physiology 1844, 3361, 3375, 5259
  plantations in
    Argentina 1716, 2857
    Estonia 5405
    France 606
    Germany 6788
    Hungary 1670
    India 5479
    Italy 5624
    Jugoslavia 3871
    Netherlands 4900
    Poland 2299
    U.S.S.R. 605
  plantations on
    field borders 2326
    old-field sites 2271
    pebble-beds 1977
    pseudogleys 3835
  planting stock 5560
  propagation, vegetative 461, 2231, 2241, 5949-50
Populus spp. — cont.
  pruning 2321, 5404
  shelterbelts 2326, 3719, 3898
  soil(s)
    effect on 1977, 5285
    fauna 49
  spacing 3831-2
  taxonomy 225-6, 1829, 5126, 5406
  thermal relations 5259
  water relations 256, 3835
    hydrological 5347
  weedkillers, effects of 2271, 4067
  wood
    anatomy 1245, 1250-1, 6340, 6687
    chemistry 6687, 6748
    chips 4779
    decay 1512, 3083
    density 4555, 6338, 6340
    durability 1512
    fibreboard 3142
    improved 4710
    particle board 6715
    plywood 4678
    pulp & pulping 3135-6, 6675, 6687
P. Sect. Aigeiros 225
P. Sect. Leuce 2179, 2233, 3789, 4157, 4740, 5126
P. × acuminata 3776
P. alba
  bark 6687
  chemical constituents 4016, 4841
  clone trials 2572
  coppice 5404
  diseases and disorders
    bacterial 2550
    canker 2543, 2550, 5871
    foliage 878, 2572
    nutrient deficiencies 4016
  ecology 234
  flowering 2180
  genetics/breeding 185, 2180, 2572, 3431, 5181
  increment and yield 234
  injury by
    fumes 5767
  morphology 234
  nursery practice 504, 5529
  nutrition 4016
  propagation, vegetative 234, 524, 2180, 2231
  wood
    anatomy 6687
    chemistry 6687
    durability 4740
    pulp & pulping 6687
P. alba × P. balsamifera (tacamahaca) 878
P. alba × P. glandulosa 463
P. alba × P. grandidentata 1898, 2550, 4740
P. alba × P. tremula 1898, 5182
P. alba var. pyramidalis (P. alba cv. 'Bolleana') 2231, 3348, 3843, 5406
P. 'Androscoggin' 3490, 3540, 4151
P. 'Angulata de Chautagne' 3491
P. 'Angulata de la Sarthe' 3491
P. 'Arges' 1573
P. balsamifera (P. tacamahaca) 126, 2320, 4021, 4068, 5318, 5952, 6058
P. × berolinensis 5086
P. × 'canadensis' (P. × euramericana) aggr.
  bark 6687
Populus × 'canadensis' — cont.
  diseases and disorders 873, 877, 4154
  economics 1183
  genetics/breeding 3434, 6687
  increment and yield 4373-4, 6153
  injury by
    flooding 758
    fumes 4021, 5767
  insect pests 991
  physiology 4021
  plantations in
    Greece 3717
  plantations on
    flood-plain embankments 3896
  rotation 4373
  site requirements 5262
  weed control 798
  wood
    anatomy 4610, 6687
    chemistry 2973, 6687
    density 4610
    posts 4703
    preservation 4703
    pulp & pulping 6687
    shrinkage 4610
    variation with growth factors 4610
P. 'canadensis' × P. blasamifera 6687
P. 'canadensis' × P. lasiocarpa 6687
P. 'canadensis' × P. 'Majskij' 6687
P. 'canadensis' × P. suaveolens 6687
P. candicans 3357, 5767
P. canescens 2572, 3785, 4740, 5404, 5529
P. canescens × P. grandidentata 4740
P. 'Carolin de Garonne' 3491
P. 'Caroliniano cercenasco' 3491
P. caspica 5406
P. 'CBD' 4310
P. 'Celei' 1573, 4531
P. 'Charkowiensis' 225
P. ciliata 4803, 5406
P. davidiana see P. tremula var. d.
P. deltoides (incl. var. monilifera)
  buds, morphology 1864
  diseases and disorders 2543-4, 3433, 4153, 5871
  economics 1175
  fertilizers 2211
  flowers, hermaphrodite 1864
  genetics/breeding 1898, 3432-3, 3719, 5179, 5896
  increment and yield 2298, 3841, 4375, 5479
  insect pests 952
  nutrition 5270
  phenology 3607
  plantations in
    India 5479
    Indiana 607
  plantations on
    spoil mounds 3841
  planting methods 5572
  propagation, vegetative 524, 1898, 2211, 2232, 5544
  seed germination 5317
  seedling growth 5317
  soil flora 5027
  taxonomy 3491
  water relations 257, 2298
  wood
    chemistry 6377
    density 6339
P. 'deltoides angulata' 2598

Populus deltoides 'Virginiana' 4531
P. deltoides 'Virginiana cetate' 1573
P. deltoides × P. nigra cv. caudina 3719
P. deltoides × P. nigra var. italica 1898
P. deltoides × P. simonii 5896
P. 'Dorskamp' 3490
P. 'Duitsland' 3490
P. 'Eckhof' × P. maximowiczii 3431
P. × eugenei 607
P. euphratica s.l. 5406
P. euramericana aggr. see P. 'canadensis' aggr.
P. 'Flevo' 3490
P. 'Forndorf' 3540
P. 'Gelrica' (P. × gelrica) 2429, 3490
P. 'Geneva' 3490
P. globosa 5406
P. grandidentata 418, 1898, 4740, 5346
P. grandidentata × P. tremula 186
P. 'Grandis' 4531
P. 'H. 418' 6591
P. 'Heidemij' 3490-1
P. 'Herapa' 5651
P. 'Hybrid 5 Berezin' 6153
P. 'Hybrid 773' 6153
P. 'I-45/51' 2429, 3766, 5521
P. 'I-154' 278
P. 'I-214'
  chemical constituents 5084-5
  diseases and disorders 4155
  fertilizers 606, 2209, 3767
  genetics/breeding 3431
  increment and yield 5580, 5583
  injury by
    low temperature 2429, 4008
    insecticides 5929
  insect pests 2599, 4237, 5929, 6005
  measurement
    tables,
      volume 4310
  nursery practice 2209, 3766
  nutrition 2212, 3541, 3766
  phenology 3381
  physiology 3361
  plantations in
    France 606
    Greece 3717
    Italy 5583
  planting methods 4237
  planting stock 4237
  production, biological 278
  propagation, vegetative 524, 5929
  root growth 5262
  root system 2006
  seed storage 5506
  site quality 5580, 6139
  soil requirements 5404, 5262, 5580
  spacing 5580
  taxonomy 3490
  water relations 2006, 3534
  weedkillers, effect of 4066
  wood
    durability 6591
P. 'I-214' × P. maximowiczii 3431
P. 'I-262' 5583
P. 'I-455' 5506
P. 'Löns' 3490
P. × marilandica (P. 'Marilandica')
  diseases and disorders 5404
  injury by frost 2429
  pruning 4531
  root growth 5262
  soil requirements 5262
P. × marilandica—cont.
  taxonomy 3490
  water relations 3534
  wood
    anatomy 4531
    defects 2429, 4531
    density 4531, 6338
    durability 6591
    improved 4714
    nail- & screw-holding properties 6374
    physical and mechanical properties 4531
    pulp & pulping 1573
P. maximowiczii 3431, 6008
P. Mičurinec' 6153
P. 'Missouriensis hollande' see P. 'Heidemij'
P. nigra
  bark 6687
  clone trials 2169
  diseases and disorders 4016
  genetics/breeding 3431
  nutrition 4016
  physiology 113
  plantations on
    flood-plain embankments 3896
  taxonomy 225
  wood
    anatomy 6687
    chemistry 6687
    pulp & pulping 1573, 4803, 6687
P. nigra 'H. 418' 6591
P. nigra var. (subsp.) betulifolia 225
P. nigra var. (subsp.) caudina 225
P. nigra var. italica (cv. 'Italica') 125, 225, 1233, 1898, 3855, 4506, 5767, 6506
P. nigra var. italica × P. 'berolinensis 773' 5952
P. nigra var. italica × P. nigra 225, 595
P. nigra var. italica × P. wislizenii 5952, 6153
P. nigra cv. 'Plantierensis' 225
P. nigra var. thevestina (P. thevestina) see also P. usbekistanica cv. 'Afghanica' 225, 1233, 3491, 5403, 5406
P. 'Oxford' 3490, 4151
P. 'Pioneer' 6153
P. × regenerata (P. 'Regenerata') 1573, 2429, 3490, 3534, 5651, 6591
P. × robusta (P. × 'canadensis' or P. × euramericana cv. 'Robusta'; P. 'Robusta')
  diseases and disorders 5404
  injury by
    low temperature 4008
    insecticides 5929
  mixtures 397
  nutrition 3541
  physiology 2912
  production, biological 278
  plantations on
    sands 397, 5651
    spoil mounds 2265
  propagation, vegetative 5929
  pruning 4531
  root growth 5262, 5651
  shelterbelts 5651
  soil requirements 5262
  taxonomy 3490
  thinning 5404
  water relations 3534
P. × robusta—cont.
  wood
    anatomy 4531
    defects 4531
    density 4531, 6338
    durability 6591
    nail- & screw-holding properties 6374
    physical and mechanical properties 4531
    pulp & pulping 1573
P. 'Rochester' 4151
P. sargentii 3543, 5395
P. × serotina (P. 'Serotina') 1573, 2265, 3490, 3534-5, 4531, 5950, 6374, 6591
P. 'Serotina de Champagne' 3355, 3490
P. simonii 5952
P. sosnowskyi 225
P. suaveolens 5952, 6153
P. sukatshewi × P. tremula 5182
P. tacamahaca see P. balsamifera
P. thevestina see P. nigra var. t.
P. tremula
  bark 6674
  barking 2997
  chemical constituents 4841
  clone trials 189, 2572
  conversion to Pine 5418
  diseases and disorders 878, 2572, 4112-3, 5844
  distribution 5406
  fire resistance 4044
  flowering 2180, 5118
  foliage,
    flammability 4044
  forest types 307, 353, 367, 650
  fruiting 2050
  genetics/breeding 185, 189, 1898, 2180, 2572, 3431, 5180-2
  growth substances, effects of 2274
  increment and yield 187, 1136, 2050, 4397, 4417, 5424
  injury by
    fumes 5767
  insect pests 945
  litter/humus 4998
  management 4417
  measurement
    stacked wood 6123
    tables
      volume 2717, 4311
  mixtures 5424
  monograph 235
  pollen 5118
  propagation, vegetative 524, 1898, 2180, 2231, 3785
  regeneration
    natural 307
  suckering 307
  underwood 353
  variation 1512-3, 4112-3
  weedkillers, effects of 4058
  wood
    anatomy 189, 1563, 2884, 4516, 6674
    chips 1551-2
    decay 1514-6, 1552, 4112-3, 4740, 5843
    defects 4780
    density 4556
    durability 1512-3, 4113, 4740
    particle board 1598
    pulp & pulping 1552, 4802, 6675, 6688

Populus tremula—cont.
pulpwood 1514-6
storage 1515-6, 1551-2
P. tremula var. davidiana (P. davidiana) 3431
P. tremula var. gigas 3389
P. tremula × P. tremuloides 462,5180-1
P. tremula × P. wesjolo-bokowenkiensis 5182
P. tremuloides
bark 1634
bibliography 3489
burning, controlled 4051
chemical constituents 89, 1634, 3356, 4841
clone trials 462, 5180
control, chemical 628, 630, 4068
diseases and disorders 837, 865, 2550, 4135-6, 5197, 5869-70
foliage
moisture 5783
reflectivity 4986
forest types 391, 5346, 5393
fire control 4051
genetics/breeding 187-8, 418, 462, 5179-81
increment and yield 187, 462, 2758, 5180
insect pests 2627, 6004
light relations 133, 4986
logging 2397
physiology 2890
propagation, vegetative 418, 530, 775
radiation, effects of 775
regeneration
natural 418, 6004
site quality 4362
soil requirements 5393
stand
structure 5346
succession 5393
suckering 418
thinning 628
underplanting
with Spruce 543
variation 187, 418
wood
anatomy 187, 3125, 5180
chemistry 1358, 3120, 3125, 5180
chips 3120
defects 1562, 3125
density 187, 462, 5180
properties & uses 2872
pulp & pulping 5180, 6689
storage, chips 3120
variation with genetic & growth factors 187, 462, 5180
P. trichocarpa 374, 1318, 1633, 3358, 3718, 4018, 4833, 4841, 6153
P. usbekistanica, incl. cv. 'Afghanica' (see also P. nigra var. thevestina) and subsp. tadshikistanica 225
P. 'Virginiana de Frignicourt' 3491
P. yunanensis 2543, 5871
P. 'Zeeland' 3490
Pouteria cuatrecasasii 3493
Prieurella colombiana 3493
Prioria copaifera 2419, 4734
Prosopis spp. 5769
P. cineraria 1137
P. dulcis 5648
P. juliflora 1138
P. juliflora var. velutina see P. velutina
Prosopis spicigera 1749, 5293, 5592
P. velutina 5304
Prunus spp. 494, 1663, 5917
P. amygdalus 1900, 5290
P. avium 494
P. bucharica 5290
P. buergeriana 4657
P. cerasus 2048
P. fruticosa 284
P. laurocerasus 247, 772
P. mahaleb 3760, 3844
P. maritima 3843
P. padus 2436
P. serotina 1264, 3068, 3889, 5310, 5557
P. spinosa 284
P. spinosissima 5290
P. vavilovii 5290
Pseudobornia ursina p. 201 (Germany)
Pseudocedrela kotschyi 4595
Pseudocladia colombiana 3493
Pseudopanax laetevirens 6269
Pseudosindora palustris 6454
Pseudotsuga 5125
P. menziesii
bark 1632, 6083
chemical constituents 1632, 1958, 5069, 5848
cone crops 2036, 2127, 5487
control, chemical 2420
decorative greenery 3908-9
diseases and disorders
dieback 4122
foliage 2559, 2565, 4148, 5888, 5938
phloem necrosis 5865
root & butt 850, 2527, 5845, 5848
stem rot 5842
drought resistance 175
fertilizers 561, 3909, 5613
flowering and fruiting 2036-7, 5487, 5500
foliage weight 5069
forest types 5393
frost resistance 455, 1958, 3835, 5123
genetics/breeding 148, 174, 457, 3402, 3425, 5188
growth substances, effects of 2247
increment and yield 960, 1134-5, 3715-6, 4384, 4389, 4397, 5464, 6151
injury by
frost 1958, 3835, 5760, 5865
fumes 770
mistletoe 4071
nematodes 6065
rodents 2127, 4162
silting 4012
wind 755, 5756
insect pests 960, 1021-3, 1032, 1060, 2661, 2665, 5932, 5938, 5965, 6021
leaves, area measurement 5131
light relations 1737, 3402, 5249
litter/humus 2486
logs,
protective treatment 6617
measurement,
tree and stand 2720
mixtures 755
mycorrhiza 288, 1996, 3561, 3564, 6065
nursery practice 2243, 2584, 5552
nutrition 116, 2047, 5069, 5277
Pseudotsuga menziesii—cont.
physiology 113, 1850, 1857, 1958, 3376, 5102
plantations in
Argentina 5464
Czechoslovakia 426-7
France 561
Jugoslavia 6151
New Zealand 2156
Poland 3687
plantations on
pseudogleys 3885
planting
methods 3816, 3823, 2826
site preparation 561
planting stock 557-8, 2251, 2254, 3810, 3816-7, 3820, 5552, 5555, 5567, 5574
pollen 174, 1873
propagation, vegetative 2234, 3791-2, 5500, 5548
provenance
trials 175, 447, 454-6, 3715-6, 5476
pruning 2318
regeneration,
natural 885, 2127, 3341, 5249, 5436
root growth 116, 1961
root system 294, 3570
seed
de-winging damage 485
diseases & pests 885, 2127
drying 3736
germination, 2127, 2047, 3736
production 2127
sorting 3734
storage 3736
testing 485, 499
treatment 5476
weight 5476
seed orchards 2179, 3425, 5500
seedlings 5249
shoot growth 116, 3376
soil(s),
effects on 1996, 5281
soil requirements 5393
sowing, direct 5555
spacing 5574
succession 5393
thinning 728, 2312, 3971
variation 454-7, 1958, 5188, 5476
water relations 175, 1961, 3835, 4566, 5264
hydrological 1783
weed control 561, 586, 2222, 3816, 3849, 5604
weedkillers, effects of 586, 2222
wood
acoustic properties 4534
anatomy 1235, 1253, 2942, 3402, 6290
boat timbers p. 201 (Australia)
borers 6021, 6617
branchwood 6336
chemistry 1318, 4588, 6290, 6404, 6376
constructional timber 6359
corrosive effects 6404
defects 1253, 1560, 6657, 6660
density 2949, 6307, 6336
drying 3072, 3112, 4768, 6632, 6667
durability 4738
colouring 3030
fireproofing 3074

Pseudotsuga menziesii—cont.
grading 6345-7
improved 3072
laminated beams 6517
marketing 2156, 4453
moisture relations 4544
painting 4665
particle board 1605
permeability 2942
piles 6496
plywood 3014, 6510
poles 1560, 6496, 6559
preservation 3060, 3065, 4665, 6496, 6559
prices, roundwood 6227
pulp and pulping 3134, 4790, 6679
resonance wood 4534
sawmill studies 6669
screw-holding properties 2969
sheathing 3014
shrinkage and swelling 6323
strength properties 2963, 3074, 4562, 4566, .4681, 6307, 6347, 6359, 6365, 6371
thermal properties 6313
variation within tree 6336
veneer cutting 6482
wood-wool 6702
P. menziesii var. caesia 3715
P. menziesii var. glauca 539, 556, 3426, 5931, 6015
P. menziesii var. viridis 3424, 3426, 3715, 4002, 4006
P. taxifolia see P. menziesii
Psidium spp. 2072
Psittacanthus sp. 5811
P. cuneifolius 5081
Psychotria spp 1931
Ptaeroxylon obliquum 1355-6, 4596-7
Pteleopsis myrtifolia 4487
Pterocarpus angolensis 268, 2989, 4366, 4593
P. marsupium 1261
P. santalinus 5409
P. soyauxii 1529
Pterocarya pterocarpa (P. fraxinifolia) 5671
P. rhoifolia 371, 4657
Pterodon pubescens 1487
Pterogyne nitens 1829
Pterygopodium oxyphyllum see Oxystigria o.
Purshia tridentata 1997
Pycnanthus angolensis 3078
Pygeum africanum 2864
P. arboreum 4801, 6254
Pyrus (incl. Malus) spp. 518
P. communis 3456
P. malus s.l.(Malus pumila, M. 'domestica') 6127

Quararibea dolichopoda 1924
Quercus (incl. Cyclobalanopsis) spp.
allelopathic effects of 304
bark 1480
burning, controlled 2099
chemical constituents 1480
conversion, defective stands 5647
coppicing 5440
diseases and disorders 824, 856, 880, 2531-2, 2568, 4128, 5859, 5861
fire control 2459

Quercus spp.—cont.
foliage,
amount of 5375
forest types 1663, 3276, 3629-30, 5350, 5368
genetics/breeding 5174
injury by
deer 1811
effluents 3870
insect pests 901
Col. 2645, 2648, 4246
Dipt. 2683
Hem. 938
Hym. 1062, 6057
Lep. 977, 983, 2630, 5969-70, 5998
light relations 105, 4982
litter/humus 50, 3302
measurement
tables,
volume & yield 4316
microclimate 5375
mixtures 2099
palaeoecology 3613
physiology 5095
plantations on
roadsides 3895
planting stock 3799, 3810
radio-isotope accumulation 84
regeneration
natural 337, 5439-40
seed
diseases & pests 824, 2648, 4246, 6057
seedling(s) 5439
site quality 4364
soil
fauna 54
succession 336
taxonomy 203, 3482, 5204
thinnings 5375
water relations, hydrological 5034
wood
decay 5843
drying 6642
extractives 1480
flooring 6406
pallets 1457
particle board 1597
properties and uses 1217
Q. agrifolia 935
Q. alba
chemical constituents 2616
control, chemical 623, 626, 629, 2487, 4070
diseases & disorders 4118, 4158, 5858
fertilizers 6162
flowering and fruiting 5310
foliage weight 6130
forest types 2101, 5340
increment and yield 4397, 6162
insect pests 2616, 2683, 4246
litter/humus 40
measurement
tables,
tree weight 6130
tree and stand 6129
nursery practice 3776
pruning 2315
radiation, effects of 85, 4027
regeneration,
natural 5439
seed
germination 5310

Quercus alba—cont.
irradiation 4027
production 5310
seedling
development 5439
site quality 4364, 6135
thinning 2315
weight, tree 6129-30
wood
anatomy 4514
density 6129
preservation 4702
Q. arizonica 2568
Q. boissieri see Q. infectoria
Q. borealis (Q. rubra) (incl. var. maxima)
control, chemical 623, 626, 630
diseases & disorders 4093
fertilizers 4199
fire resistance 4044
flowering & fruiting 315, 5310
foliage
flammability 4044
weight 6130
forest types 5346
injury by
fumes 5767
salt 4013
insect pests 974, 990, 2683, 4199, 4246
light relations 1848
nursery practice 3776
measurement, tables,
tree weight 6130
nutrition 1969
physiology 5036
plantations in Latvia 2143
regeneration, natural 5439
seed, production & germination 5310
seedling development 5439
site quality 1115, 6137
stand
structure 5346
water relations 5036
weed control 5605-6
wood
defects 3595
moisture relations 4568
nail-holding properties 4632
preservation 4702
strength properties 4568
Q. castaneifolia 204, 641
Q. cerris
bark 6092
coppice 5416
injury by
frost 756
increment and yield 4391
insect pests 977
measurement
stacked wood 6123
tables, volume 6092
tree & stand 6081, 6092
nursery practice 5518
nutrition 1969
physiology 1842
regeneration,
natural 3675
sap flow 1842
soil
flora 42
soil requirements 5518
stem form 6092
tree classes 1842

Quercus cerris—cont.
wood
defects 3121
drying 3121
durability 3121, 4739
fibreboards 3147
grading 3121
mine timbers 3121, 6555
pulp & pulping 3136, 3147
preservation 6555
steaming 3105
strength properties 3121, 6555
thermal properties 6400
Q. coccinea 629, 3485, 4070, 6130, 6162
Q. coccinea × Q. velutina 3485
Q. conferta see Q. frainetto
Q. crispula 1293, 1389, 5402, 6408, 6645
Q. crispula × Q. dentata 5402
Q. crispula × Q. mongolica 5402
Q. dentata 50
Q. douglasii 1901
Q. ellipsoidalis 857, 5197, 5860
Q. emoryi 5304
Q. falcata 6130, 6604
Q. falcata var. pagodaefolia 2191
Q. floribunda 4831
Q. × fontana 3485
Q. frainetto (Q. conferta) 42, 3674
Q. gambelii 133, 4986-7
Q. hartwissiana 5174
Q. ilex 36, 788, 1627, 1950, 1960, 2083, 2639, 3284
Q. incana 4831
Q. infectoria 4386
Q. insularis 3483
Q. ithaburensis 5379
Q. kelloggii 214
Q. longipes 3507
Q. macedonica 1259
Q. macrocarpa 85, 144, 546, 3776, 4158
Q. michauxii 3484
Q. mongolica 1383
Q. nigra 4118, 5876
Q. nuttallii 2191, 4118, 5527, 5850
Q. palustris 3684
Q. pedunculiflora 578, 2179, 5174
Q. persica 333
Q. petraea see Q. sessiliflora
Q. phellos 2191, 2298, 6297
Q. prinus 623, 2238, 3484, 4070, 5114, 5439, 5639, 5859, 6482
Q. pubescens 52, 788, 1217, 2870, 5174
Q. robur s.l.
bark 6740
barking 3946
chemical constituents 5352, 5359, 5364, 6740
dendrochronology 2771
distribution 3183
ecology 5237, 5351-64
forest types 360, 3625, 5009, 5237, 5351-64
injury by
frost 3835
voles 4163
insect pests 977, 982, 2634, 4197, 5363, 5960, 5971, 6007
light relations 5353, 5356
logs
protective treatment 6649
management 3188, 3653, 5633
measurement
tables, volume 1091
tree and stand 1091
Quercus robur s.l.—cont.
microclimate 3255, 5356-8, 5353-4, 5360-1
nursery practice 5536
phenology 5351, 6007
plantations on pseudogleys 3835
production, biological 5364
regeneration
artificial 3893
natural 414
root, growth 1961
seed, pests 6007
silviculture 3653, 3893, 5633
soil(s)
effect on 35
fauna 51
flora 5026
succession 5341, 5647
tanstuffs 6740
taxonomy 5237
tending 5633
thinning 617, 5633
water relations 258-9, 1961, 3835
hydrological 3550, 5354, 5361
weed control 587, 4058, 5536
wood
chips 1551, 4779
drying 6630
moisture relations 4542
pulping 3135-6
thermal properties 6313
storage, chips 1551, 4779
veneer 3653, 6664
Q. robur s.s.
allelopathic effects 2017
chemical constituents 90, 113, 5114, 5352
coppice 2063
crown form 617
dendrochronology 4007
diseases and disorders 4093, 4158
ecology 5237-8, 5319, 5351-64
economics 1183
fauna 72
distribution 5245
fertilizers 3768
forest types 353, 5237-8, 5319, 5345, 5351-64
genetics/breeding 5174
growth substances, effects of 125, 546
growth substances in 5114
increment and yield 4372, 4397, 6076
injury by
fertilizers 3768
frost 4007
ice 2431
salt 4013
insect pests
Col. 6035
Hem. 2352
Hym. 4279, 4285
Lep. 975, 2629, 2633, 5948, 5968, 5989
light relations 1954, 1972, 3521, 3652
litter/humus 41, 1752, 1770, 3554, 4999
measurement, tables
assortment & volume 4311
microclimate 570
mixtures 2132, 3577, 5599
mycorrhiza 1982
nursery practice 5518, 5552
phenology 181, 3521
physiology 113, 125
Quercus robur s.s.—cont.
planting stock 5552
production, biological 2063
propagation, vegetative 2239-40, 5114
provenance trials 2168
regeneration, natural 415, 3674
root(s)
excretions 2017
grafting 5298
growth 3652, 5297
root system 299
seed treatment 2182
seedling
development 2168, 3652
shoot growth 5297
silviculture 3652, 5319
soils,
effect on 277
soil requirements 5518
sowing, direct 3802, 5579
spacing 5579
tanstuffs 1627
thermal relations 5253
thinning 617
underwood 353
weed control 5605
wood
anatomy 2922, 3652, 6295
decay 1517
defects 2922, 6655
particle board 1605-6
properties and uses 1217, 2870, 2927
sawmill studies 6235
steaming 3105
strength properties 6351
veneer 6481
Q. robur subsp. montana 213
Q. rubra see Q. borealis
Q. semecarpifolia 4831
Q. serrata 1389, 6743
Q. sessiliflora (Q. petraea)
bark 1627, 2957, 4526
chemical constituents 1627
crown dimensions 2754
diseases and disorders 4093
economics 1183
forest types 5350
increment and yield 2754, 6179
insect pests 5948, 5968
light relations 1848, 1954
management 6179
nutrition 1762-3
mixtures 400, 2132, 3675
physiology 1842, 1848
regeneration,
natural 2132, 3674-5
reproduction, vegetative 2024
sap flow 1842
soil(s)
effect on 1762-3
flora 42
suckering 2024
tanstuffs 1627
tree classes 1842
water relations,
hydrological 1762-3
weed control 798, 5605
wood
density 2957
mine timbers, preservation 6555
properties and uses 1217, 2870
strength properties 4526, 6555
Q. suber
chemical constituents 6741

Quercus suber—cont.
cork 2322, 6742
diseases & disorders 5819
economics 6206
fire, control 788
forest types 788, 5350
insect pests 985, 2639
pruning 2322
site requirements 5558
sowing, direct 5558
waxes 6742
Q. turbinella subsp. californica 1901
Q. velutina 2101, 3485, 6135-6, 6566
Quiina spp. 6270

Racemobambos spp. 1918
Ramelia spp. 5219
Raphia taedigera 376
Rea 209
Rhamnus cathartica 3473
R. frangula (Frangula alnus) 3473, 4839
R. kayacikii 205
R. purshiana 6377
R. zeyheri 1214
Rhizophora apiculata, R. harrisonii & R. lamarckii 1947
R. mangle 375, 1947, 3593
R. mucronata 110, 1947, 3632, 4320
R. racemosa 3575
R. stylosa 1947
Rhododendron ponticum 817
Rhus cotinus 824, 1480
R. javanica 6387
R. striata 193
R. succedanea 1650
Ribes spp. 2540
Richardella buenaventurensis & R chocoensis 3493
Ricinodendron heudelotii 4800
R. rautanenii 6769
Robinia spp. 5099, 5176
R. pseudoacacia
cambial activity 2925
chemical constituents 1817
cleanings 5441
competition 5585
coppice conversion 397
diseases and disorders 824, 5907
fertilizers 4199
genetics/breeding 1898, 5176, 5181
increment and yield 4397, 5441
injury by
fumes 5767
insecticides 5929
insect pests 497, 4199, 5992
litter/humus 3302
mixtures 5585
nursery practice 497, 515
nutrition 1817, 5587
ornamental 1921
phenology 2925, 5333
phloem 1255, 2925, 6302
plantations in
Rumania 5431
Tunisia 5648
plantations on
pebble-beds 1977
spoil mounds & strip-mined land 2265, 5585-7
propagation, vegetative 1898, 3785, 5543
regeneration
artificial 5441
Robinia pseudoacacia—cont.
natural 416, 2025, 5431, 5441
root nodules 282
seed
diseases 824
treatment 496
site quality 1115
soil fauna 49
soils, effect on 1977, 5587
suckering 308, 416, 2025, 5441
understorey 353
water relations 259
wood
anatomy 1234, 2910, 6297
chemisty 2910
pulp & pulping 3136
strength properties 6351
Rosaceae 224
Rubus fruticosus 3848
Rudgea spp. 1931
Rutaceae 5203

Sabina chinensis see Juniperus c.
Salicaceae 226, 3459
Salix spp.
bark utilization 648, 3148, 6748
chemical constituents 5082, 5258, 6748
diseases and disorders 608, 855, 2545, 4156
foliage utilization 6748
forest types 365, 648, 1663, 3625, 5395
genetics/breeding 464, 608, 1898, 1900, 3436
injury by
fumes 5767
voles 4163
insect pests 608, 946, 997-8, 5943
measurement,
stacked wood 1109, 6123
physiology 112
plantations in Argentina 608, 2857
plantations on sand pits 2295
propagation, vegetative 1898, 5545
shelterbelts 3898
silviculture 365
tanstuffs 648
thermal relations 5258
weed control 658
wood
anatomy 1245
fibreboards 3148
utilization 608
S. acutifolia 126
S. alba
forest types 365
genetics/breeding 466, 1899, 2929, 3427, 5178
increment and yield 1899
insect pests 2682, 4226
plantations on
floodplain embankments 3896, 5649
sandy soil 466
silviculture 365
variation 3437, 5178
wood
anatomy 2929
properties 2929, 4496
S. alba var. caerulea 5444
S. alba × S. babylonica 465
S. alba × S. fragilis 3436-7
S. alba × S. humboldtiana 3436
Salix alba × S. matsudana 3436
S. alba × S. nigra 3436
S. 'americana' 4226
S. × argentinensis 1932
S. atrocinerea 5091, 5114, 5546
S. bebbiana 4804
S. caprea 3785, 4023, 4226
S. daphnoides 5082
S. fragilis 3359, 3437, 4512, 5091
S. hawaiana 4226
S. nigra 5027
S. purpurea 4226, 5082
S. repens 5091
S. × rubens 3437
S. rubra 1856, 4226, 5988
S. sultana 4156
S. triandra 6055
S. viminalis 958, 3594, 4044, 4156, 4226, 5096-7
S. × viridis 3437
Salmalia see Bombax
Salvadoraceae 3460, 5203
Salvadora oleoides 5592
Samanea (Pithecellobium) saman 3169
Sambucus nigra 284, 353, 3473, 3768, 3848
S. nigra var. laciniata 2265
S. racemosa 353, 5908, 6295
Santalum 1948
S. album 3390, 4161, 4826, 5910
S. freycinetianum & S. obtusifolium 3390
Sapindaceae 5203
Sapium 3492
S. sebiferum 2895
Sapotaceae 227
Sarāca 5226
S. celebica & S. asoca 5227
Sarawakodendron filamentosum 208
Sarcocephalus see Nauclea
Sarcotheca spp. 5230
Sasa 1919
S. amphitricha 50
Sassafras albidum 623, 5639
Saxegothaea 5207
Scaphopetalum thonneri 5303
Schinopsis spp. 1480
Schizolobium parahybum 994
Schizostachyum spp. 1917-8
S. lumampao 1583
Schleichera oleosa 1041, 5672
Sciadopitys verticillata 1389, 2044, 5139
Scorodophloeus sp. 3283
Sebastiania rhombifolia 3492
Sequoia spp. 5151, 5756, 6156
S. gigantea 1254, 3572, 5139, 5886
S. sempervirens
coppice 2023, 3582
ecology 1941
economics 1681
genetics/breeding 3427, 3695
increment and yield 1129
injury by flooding 1684, 6810
logging waste 686
plantations in U.S.S.R. 3695
regeneration, natural 2023, 3582
root growth 3572, 6810
thermal relations 1955
veteran stands, protection of 1682-4, 6810
wood
chemistry 6385-6
decay 4741
drying 1544, 4759

Sequoia sempervirens—cont.
durability 4741
screw-holding properties 2969
Sequoiadendron see Sequoia gigantea
Shiia see Castanopsis
Shorea spp. 1224, 1383, 2946, 2991, 3603, 4821, 6614, 6690
Shorea albida 2403
Shorea assamica 6454
S. hypochra 1383, 1576, 6588
S. kalunti 1246
S. laevis 6690
S. macrophylla 1225
S. negrosensis 1224, 4657, 6261, 6408, 6454-5, 6520
S. palosapis 4657
S. philippinensis 1383, 6454-5
S. polysperma 1224
S. robusta
bark 6390, 6739
chemical constituents 1822, 6390
forest types 5410
genetics/breeding 1903
increment and yield 6145-6
management 5410
nutrition 1822
plantations vs. natural forest 6145-6
regeneration
artificial 5444
natural 2134, 5429
site indicators 2134
wood
chemistry 6390
decay 1518
durability 1372, 1519, 6587
old wood, changes in 1372
physical and mechanical properties 1310, 6421
S. squamata 1224
S. stenoptera 3705
S. talura 1903, 6390
Simaroubaceae 5203
Simarouba amara 3761
Sindora siamensis 6587
Sloanea spp. 4807
Solenocarpus 1922
Sonneratia 1948, 3396
Sonneratiaceae 3460
Sophora chrysophylla 2075
S. microphylla 5246
Sorbus aria 6768
S. aucuparia 609, 649, 2274, 2436
Spathelia sorbifolia 4598
Spondias 1922
Sterculia dawei 4578
S. oblongata 6268
Stewartia monadelpha 1612
Stillingia spp. 5769
S. argutedentata 3492
Streblus indicus 3517
Strychnos toxifera 3169
Styrax agrestis 1947
Swartzia brachystachya 219
Sweetia dasycarpa 1862
Swietenia spp. 4212
S. macrophylla 467, 2442, 3706, 6258
S. mahagoni 467, 1518
S. mahagoni × S. macrophylla 467
Swintonia floribunda 6413
Symplocas bicolor, S. molinae, & S. vernicosa 3462
Syncarpia glomulifera (S. laurifolia) 1489, 3892
Syringa vulgaris 125, 5333
Syzygium spp. 3087, 6258
S. cinereum, S. cuminii & S. nodosum 1909

Tabebuia sp. 4642
T. avellanedae 4590
T. chrysantha 6388
T. donnell-smithii see Cybistax d.-s.
Tabernaemontana coronaria 5195
Tamaricaceae 5203
Tamarindus indica 5134
Tamarix spp. 5350
T. aphylla (T. articulata) 639, 4809, 5273, 5592
T. pentandra 245
T. ramosissima 5395
Tarrietia utilis 2146
Taxodiaceae 5139, 5209
Taxodium 5139
T. ascendens 'Nutans' 540
T. distichum 540, 2140, 3904
Taxus spp. 3722, 3904, 5944
T. baccata 243, 524, 2985, 3393, 3513, 5071, 5089
T. baccata repandens 3757
T. brevifolia 265
T. canadensis 3162
Tecomella undulata 3367
Tectona grandis
fertilizers 512
forest types 3634, 5409
genetics/breeding 1370, 3442
increment and yield 1123, 6145
management 5409
mixtures 2350
nursery practice 512
plantations in
India 6145
Papua & New Guinea 3192
production, biological 2791
propagation, vegetative 5549
pruning 636
regeneration, artificial 5444
site quality 4365
weed control 811
wood
durability 1370-2, 1519, 6587
gluing 6454-5
old wood, changes in 1372
strength properties 1310, 2967
variation with growth factors 2967
Terminalia spp. 1212, 1346
T. australis 263
T. avicennioides 1346
T. brownii 6267
T. crenulata 2791
T. glaucescens 1346
T. ivorensis 1346, 2146
T. myriocarpa 1310, 5444
T. ruspolii 6267
T. samoensis 1948
T. sericea 4487, 5635
T. superba 1215, 2146, 4502, 6373
Ternstroemia africana 5232
Tetraberlinia tubmaniana 6255
Theaceae 3459
Thespesia populnea 5079, 6755
Thuja spp. 3381, 3904, 5263, 5756, 5944
T. occidentalis
bark 3162
browse 5060
cambial activity 2889
Thuja occidentalis—cont.
chemical constituents 2985, 3162, 4794
forest types 3411, 5346
injury by
deer 1812
ice 4009
nematodes 6060
insect pests 943
nursery practice 2218
soil(s), effect on 3553
stand, structure 5346
weight, tree 4794
wood
anatomy 1236, 2889
chemistry 4589
painting 6490
pulp & pulping 4794, 6685
T. orientalis 420, 524, 5071, 5976
T. plicata
diseases and disorders 835
flowering 5498
growth substances, effects of 5498
injury by
frost 3835
mice 4162
insect pests 885, 997
leaf anatomy 5263
physiology 5263
plantations on
peat 2281
pseudogleys 3835
regeneration, natural 885
seed
pests 885
sorting 3734
silvicultural characters 5210
soil(s)
effect on 3551
water relations 3835, 5263
wood
boat timbers p. 201 (Australia)
chemistry 1339-40, 6376
electrical properties 4541
fireproofing p. 570 (U.S.A.)
grading 6345
piles 6496
poles 3065, 6496
preservation 3065, 6496
screw-holding properties 2969
sheathing 3014
shingles p. 570 (U.S.A.)
T. standishii 1389, 2984
Thujopsis dolabrata 1341, 1389
T. dolabrata var. hondai 191
Thyrsostachys spp. 1917
T. siamensis 3923
Tilia spp.
chemical constituents 3358
control, chemical 627, 631
coppice 2063
insect pests 5934
measurement
stacked wood 1109
production, biological 2063
regeneration
natural 337, 5934
soil, fauna 56
taxonomy 1933, 3358
thinning 631
wood, decay 5843
T. americana 484, 5310, 5346, 6576
T. caucasica 5671
T. cordata (T. parvifolia)
allelopathic effects 2017

Tilia cordata—cont.
chemical constituents 1818
distribution 5245
fertilizers 513
fire resistance 4044
foliage
flammability 4044
forest types 5239
increment and yield 4397
injury by, ice 2431
light relations 1954
litter/humus 3554, 5239
measurement tables
assortment & volume 4311
physiology 113
root excretions 2017
site quality 5239
soil requirements 5239
soil(s), effect on 276
taxonomy 3494
T. × europaea (T. × vulgaris) 759, 1491, 5355
T. japonica 1367-8, 4657, 6409, 6645
T. parvifolia see T. cordata
T. platyphyllos 1954, 3494, 5239
T. tomentosa 5599
T. × vulgaris see T. × europaea
Tocoyena brasiliensis 1862
Toona spp. 4218
T. ciliata 1123, 5136, 5975, 6394, 6474
Torreya californica 313
Touroulia spp. 6270
Trichospermum richii 6258
Trigonobalanus verticillata 1927, 6272
Trigonostemon spp. 5219
Triplochiton scleroxylon 2621, 4502, 4793, 6264, 6561, 6661
Tristania spp. 1383, 1576, 6588
T. conferta 3892
T. suaveolens 6272
Tristiropsis 1948
Trithrinax biflabellata, T. campestris & T. schizophylla 6767, 6771
Tsuga 5125
Tsuga spp. 28, 1481, 6496, 6679
T. brunoniana 6145
T. canadensis
bark 3162
chemical constituents 3162
control, chemical 630
forest types 5346
insect pests 943, 2619, 2644
logging 2397
plantations in Rumania 5431
planting 5556
regeneration, natural 5431
sowing, direct 5556
stand structure 5346
wood
anatomy 4517
permeability 2948
properties and uses 1212
T. caroliniana 2619
T. diversifolia 2619, 4149
T. dumosa 1663
T. heterophylla
control, chemical 2420
diseases and disorders 2565, 4106, 5863
fertilizers 3763, 5613
injury by
frost 3835
mice 4162
insect pests 973, 4225
leaves, area measurement 5131
Tsuga heterophylla—cont.
light relations 5247, 5249
plantations on
peat 2281
pseudogleys 3835
regeneration 5249
natural 885
seed
pests 885
sorting 3734
seedlings 5249
silvicultural characters 5210
soil(s), effect on 3551
water relations 3835
wood
anatomy 1235, 6662
chemistry 4576, 6376
constructional timber 6359
decay 3094, 4106
defects, spiral grain 6657
density 6335
drying 3112, 4771, 6632
durability 4738
grading 6345-6
packaging 3094
painting 6490
piles 6496
preservation 3060, 6496
pulp & pulping 4790, 4793, 4795, 6700
screw-holding properties 2969
strength properties 1307, 4681, 6355, 6359, 6365
veneer & plywood 6510
wood-wool 6702
T. mertensiana 1632, 2565, 3644, 5313
Turraeanthus africana 1357
Turneraceae 3459

Uapaca kirkiana 4487
Ulex europaeus 3721
Ulmaceae 937, 3495
Ulmus spp.
coppice 2063
diseases and disorders 2529-30, 4123, 4127, 5854
forest types 1663
genetics/breeding 192, 1900
insect pests 995, 1033-4, 2669-72, 4200, 4270, 6033
production, biological 2063
taxonomy 192, 3496
wood
borers 3097
strength properties 6351
U. alata 6398
U. americana
chemical constituents 4269, 6030, 6032
diseases and disorders 859, 4124, 4126, 5586, 5855-7
forest types 5346
fruit morphology 3444
growth substances, effects of 4504
growth substances in 3385
injury by deer 897
insect pests 1036, 4269, 6030, 6032
physiology 3385
propagation, vegetative 3788
seed morphology 3444
seedling(s) 3444, 5318
shelterbelts 5608
stand structure 5346
variation 3444
Ulmus americana—cont.
weed control 5608
wood
anatomy 4504
strength properties 4568
U. 'campestris' 3844, 6406
U. carpinifolia 1934, 2431, 4125
U. carpinifolia × U. glabra 1934
U. carpinifolia × U. procera 1934
U. crassifolia 6398
U. davidiana 6409
U. davidiana var. japonica (U. japonica) 50
U. effusa see U. laevis
U. elliptica 2069
U. foliacea see U. carpinifolia
U. glabra (U. montana) 545, 1934, 2069, 6295
U. × hollandica 858, 4125
U. japonica see U. davidiana var. j.
U. laevis (U. effusa) 2330, 5120
U. montana see U. glabra
U. procera 1934
U. propinqua 4657
U. pumila 531, 3544-5, 4980, 5608, 6060
U. pumila var. arborea 518, 1977, 2330
U. rubra 3030, 6397
U. serotina 6398
U. thomasii 6398

Vaccinium spp. 651
V. corymbosum 4804
V. myrtillus 3369
V. vitis-idaea 3581
Vatairea guianensis 1364
Vatica grandiflora 1903
Vavaea 1948
Viburnum lantana 3473
V. opulus 649, 3473
V. plicatum see V. tomentosum
V. tomentosum 1956, 3524, 5257
Virola spp. 2419
V. surinamensis 3761
Vitex spp. 1936, 3499, 5303
V. keniensis 836

Waltheria americana 4839
Weigela florida 3524
Wellingtonia see Sequoia gigantea
Widdringtonia cedarbergensis 202

Xanthophyllum papuanum 4807
Xylia dolabriformis 6610
Xylia xylocarpa 3086, 5380-1
Xylomelum pyriforme 2911
Xylosma 1948

Yucca 2882

Zamia floridana 4025
Zanthoxylum spp. 6756
Z. elephantiasis 6757
Z. parviflorum 1642
Z. cf. also Fagara
Zelkova carpinifolia 204
Z. hyrcana 5240
Z. serrata 6565
Zizyphus abyssinica 6267
Z. jujuba 883
Z. lotus 5379
Z. mucronata 6267
Z. nummularia 5915
Z. spina-christi 5142
Z. xylopyrus 661, 1041

INDEX OF DISEASES AND INVERTEBRATE PESTS

Acanthoderes jaspidea 994
Acantholyda
  erythrocephala 2677, 6046
  hieroglyphica 6046
  nemoralis 2440
  posticalis 6046
  serbica 6046
Acontylus vipriensis 6061
Acrantus vittatus 4270
Acrimonium alternatum 3084
Adelges (Dreyfusia, Chermes, Sacchiphantes) see also Pineus
  abietis 926-7, 5930, 5936
  cooleyi 5938
  laricis 2613
  merkeri 5937
  nordmannianae 928-30, 2614, 4187, 5937
  nüsslini see nordmannianae
  piceae 928, 931-2, 1154, 4189-92, 5920, 5937, 5939-42
  prelli 5937
  tardus 933-4
  viridis 926, 2613, 5936
Adelopus see Phaeocryptopus
Aegeria
  apiformis 5950
  melanocephala 945
  tibialis see Sphecia tibialis
Aenetus
  eximius 2500
  lignivorus 2600
Agevillea abietis 5930
Agrilus
  anxius 4238
  biguttatus 5861
  suvorovi populneus 4237, 6000
Alsophila aescularia 2633
Alternaria spp. 532, 825
  tenuis 3084
Amitermes 5046
Amylostereum sp. 1046, 4275
Anacampsis populella 946
Anacanthotermes
  ahngerianus 921
  turastanicus 921
Anaera see Saperda
Anamaspis loewi 938
Anaphe venata 2621
Anobium 1465
  punctatum 4700, 6561
Anoplognathus spp. 6036
Anoxia villosa 6037
Anthaxia cichorii 5999
Antheraea eucalypti 970
Aphelenchoides spp. 1069, 6063
Aphelenchus avenae 6062, 6064
Aphis cracivora 497
Aphrophora parallela 2607
Apion fuscirostre 2491
Aplanobacter populi 2550, 4132-3 see also Pseudomonas syringae
Aradus cinnamomeus 924, 2611, 4186, 5935
Araucarius 1805
Archips fumiferana see Choristoneura fumiferana
Armillaria mellea 841-2, 2514-5, 3996, 4098-101, 5762, 5811, 5831, 5833, 5845
Aspidiotus
  gigas 438
Aspidiotus—cont.
  perniciosus 941, 2520
Atta
  laevigata 1064
  sexdens rubropilosa 1064
Aureobasidium (Pullularia) pullulans 5844, 6601

Balaninus sp. 6007
  elephas 2648
Bankia spp. 4744
Barbara colfaxiana 5931
Basidioradulum radula 839
Besbicus mirabilis 1061
Bifusella 3451
Biorhiza pallida 4285
Blastophagus see Tomicus
Bombyx mori 976
Bostrychopsis jesuita 6619
Botryodiplodia
  pinea see Macrophoma pinea
  theobromae 3078-9
Botrytis cinerea 532
Brachyderes incanus 5754
Brunchorstia
  destruens see Scleroderris lagerbergii
  pinea see Scleroderris lagerbergii
Bupalus piniarius 971-2, 4202, 4223-4, 5926, 5981-4

Cacoecia (see also Archips, Choristoneura)
  xylosteana 5960
Caeoma sanctae-crucis see Micronegeria fagi
Caliciopsis pinea 2534
Caliroa varipes 4279
Callirhytis glandium 6057
Callosobruchus chinensis 2643
Camerosporium
  piceae see Megaloseptoria gemmicida
  strobilinum 3453
Camponotus 1063, 6616
Cardiaspina
  fiscella 4612
  maniformis 4812
Carulaspis caruelii 4198
Caryomia tubicola 1065
Cedrobium laportei 4193
Cenangium
  ferruginosum 853
  singulare 865
Cephaloascus fragrans 6601
Cerambycidae 5048
Ceratocystis spp. 6600
  coerulescens 6605
  fagacearum 856-7, 990, 2506, 2531-2, 4109, 4128-9, 5858-60
  fimbriata 865, 5197
  ips 1027
  pluriannulata 990
  ulmi 858-9, 2506, 2529-30, 4123-7, 5854-7
Ceratostomella ulmi see Ceratocystis ulmi
Cercospora
  cryptomeriae 5886
  sequoiae 5886
Cerostoma 5948
Chaetomium
  cochlioides 3084
  funicolum 3084
  globosum 1506, 1585, 3084, 3092, 4751, 6596, 6605
  indicum 3089
Chalara quercina see Ceratocystis fagacearum
Chelura spp. 4744
Chermes see Adelges and Pineus
Chlorophorus
  annularis 4746
  sartor 5999
Choristoneura 1799-804
  biennis 1799, 1802-3
  fumiferana 955, 957, 1799, 1802-3, 2627, 4214-5, 5932, 5961-6
  houstoniana 4216
  lafouryana 958
  murinana 959, 5924
  occidentalis 960, 1802-3, 4217, 5967
  orae 1799, 1803
  pinus 1799, 1803, 2607
  pinus maritima 1799
  viridis 1799, 1803
Chrysocharis laricinellae 947
Chrysomela sonorae 997
Chrysomyxa arctostaphyli 5887
Chrysosporium lignorum 1552
Cimbex americana 6047
Cinara spp. 4187, 4195
  carolina 4194
  melaina 4194
  todocola 2615
  watsoni 4194
Cladosporium resinae 5028
Coccomyces heterophyllae 5863
Coccospora agricola 3084
Coleophora laricella 948
Coleoptera 989-1044, 1522-6, 2642-75, 3101, 4235-72, 4745-50, 5999-6040, 6614-22
Coleosporium spp. 4149
  campanulae see tussilaginis
  paederiae 2553
  tussilaginis 824
Colletotrichum gloeosporioides 876, 5898
Collybia peronata 1770
Coniophora
  cerebella 1473, 1488, 1509, 1512-3, 3090, 4088, 4111, 4593, 4740, 5833-4, 6549, 6560, 6587, 6590-2, 6601
  olivacea 1370
  puteana see cerebella
Contarinia sp. 5931
Coprinus micaceus 3091
Coptotermes
  acinaciformis 922, 4697
  amanii 1533
  formosanus 3104, 5046
  frenchi 922
  lacteus 1370, 6614
  sjöstedti 1529
Coriolellus palustris 3092, 6596
Coriolus versicolor see Polyporus versicolor
Cornicacoecia see Choristoneura
Corthylus columbianus 1010

Corticium spp. 1539
galactinum 4118
hydnans see Basidioradulum radula
polygonum 5844
porosum 1539
solani see Thanatephorus cucumeris
stalactiforme 871
Coryne sarcoides 2509, 5844
Corynebacterium spp. 860
Corynespora cassiicola 5899
Cossus cossus 944
Cronartium
appalachianum 5872
cerebrum see quercuum
comandrae 862-3, 871, 5872-3
comptoniae 5872
conigenum 880, 2575, 5811, 5902
flaccidum 861, 2541
fusiforme 864, 4139, 5872, 5876-9
occidentale 5872
quercuum 866, 871, 5880
ribicola 165, 867-70, 2535-40, 4079, 4141-3, 5449, 5872, 5881-5
stalactiforme 5872, 5874
Crumenula
pinea see Scleroderris lagerbergii
sororia 5864
Cryphalus
fulvo 2643
Cryptococcus fagi 2618
Cryptodiaporthe populea see Dothichiza populea
Cryptorrhynchus (Sternochaetus) lapathi 998, 2649-52, 4242, 4245, 5930, 5950, 6005
Cryptotermes 5046
brevis 1531-2
dudleyi 1533
havilandi 1530
Cryptothelia (Kotochalia) junodi 4219
Crypturgus
cribrellus 2657
mediterraneus 2657
Ctenolepisma lineata 6615
Ctenomorphodes tessulatus 2609
Curculio spp. 4246
Cycloconium oleaginum 2574
Cylindrocarpon spp. 826, 828
radicola 4083, 5754, 5822, 5836
Cylindrocladium scoparium 840, 5821
Cystotheca lanestris see Sphaerotheca lanestris
Cytospora
chrysosperma 865, 872, 2543-5, 5871
nivea 5844

Dasychira
grisefacta 5990
locuples confusi 914
plagiata 2607
pudibunda 4228
selenitica 5989
Dasyneura laricis 2681
Davisomycella
ampla 3452
fragilis 3452
Dendragapus obscurus 919
Dendroctonus
adjunctus 1011
brevicomis 1015-7, 2658-9, 6017, 6019-20
mexicanus see frontalis
micans see punctatus
Dendroctonus—cont.
monticolae see ponderosae
ponderosae 1017-9, 2660, 4261, 6017
pseudotsugae 1020-3, 2661, 4236, 6021
punctatus 1005, 4262
Dendrolaelaps
cornutus 1007
quadrisetus 1007
Dendrolimus
pini 4202, 4220-1, 5754
punctatus 905
sibiricus 907, 911, 964-6, 1150
spectabilis 967, 2631, 5978
Dermea pseudotsugae 5865
Diaporthe alleghaniensis 4137
Dictyostelium spp. 1771
Didymascella thujina see Keithia thujina
Didymuria violescens 2609, 4185
Dinoderus spp. 4746
Dioryctria spp. 905, 4179
abietella 962, 2589, 5931
amatella 962, 2589
clarioralis 962
disclusa 962
pygmaeella 962
splendidella 1077, 5972
zimmermani 962-3, 4206, 5973
Diplodia pinea see Macrophoma pinea
Diprion (see also Gilpinia, Neodiprion)
butovitschi 6048
pini 5754, 6048-9
similis 2678
Diptera 1065-6, 2681-4, 4286, 6058
Doryctes
pallida 992
Dothichiza
ferruginosa 825
populea 873, 2545, 4134
Dothistroma pini 2554-60, 4082, 4144-5, 5652, 5817, 5888-93
Dreyfusia see Adelges
Drino bohemica 1048
Drymonia chaonia 977
Dryocoetes formosanus 5049
Dryocosmus kuriphilus 1062

Earias chlorana 4226, 5988
Earomyia abietum 4179
Echinodontium tinctorium 4106
Elatobium (Neomyzaphis) abietinum 4187
Ellopia see Lambdina
Enarmonia see Laspeyresia
Endothia parasitica 2528
Epiblema tedella 950
Erannis
aurantiaria 2633
defoliaria 2633
leucophearia 2633
Eriococcus (Gossyparia) spurius 4200
Ernobius mollis 6617
Erwinia spp. 2548, 2551
salicis 855
Erysiphe trina 2568
Eteophilus notarioides 6008
Eucosma gloriola 4206
Eulecanium (Parthenolecanium)
corni 938
corni f. robiniarum 4199
fletcheri 5944
rufulum 938, 4199
Euophyum rufum 1586
Euproctis chrysorrhoea 981-2, 2637, 4229
Europhium sp. 4261
Eurytetranychus thujae 4287
Eutypella parasitica 4138
Evetria buoliana see Rhyacionia buoliana
Exenterus spp. 1059
Exoteleia
dodecella 2440

Fenusa pusilla 42801
Fiorinia externa 2619
Fomes spp. 6594
annosus 842-9, 2516-22, 4101-9, 3762, 5811, 5835-41
applanatus see Ganoderma applanatum
cajanderi (subroseus) 5842
fomentarius 4088, 4111, 5843
igniarius see Phellinus igniarius
laricis see officinalis
pini 2509, 2523, 4110
pinicola 2508, 3166, 4111
Fomitopsis annosa see Fomes annosus
Formica
fusca 6616
polyctena 908-9
Fusarium spp. 507, 532, 824-5, 828, 1539, 4084, 4098
moniliforme 4088
oxysporum 826, 2576, 3091, 4089, 5822-3, 5825
roseum 2576
solani 531, 2544, 5825
Fusidium sp. 4152

Galerucella luteola 995
Ganoderma 5200
applanatum 6605
Gilpinia spp. 2678
hercyniae 6050
Gliocladium viride 6601
Gloeophyllum spp. 6592
trabeum see Lenzites trabea
saepiarium see Lenzites saepiaria
Gloeosporium
cassia-siamensis 4080
elaeocarpi 4080
platani see Gnomonia platani
quercinum see Gnomonia quercina
Glyptosceles pubescens 996
Gnomonia
platani 4158
quercina 4158
Gossyparia spurius see Eriococcus spurius
Graphium sp. 5844
ulmi see Ceratocystis ulmi
Graphognathus peregrinus 999
Gymnosporangium spp. 3454
cupressi 2542
juniperi 5652
Gypsonoma
aceriana 4204
haimbachiana 952

Hartigiella laricis 825
Helicomyia (Rhabdophaga) saliciperda 2682
Hemerocampa pseudotsugata 5991
Hemiptera 923-41, 2610-20, 4186-4201, 5934-47

Heterotermes 5046
  indicola 1533, 6546
Hexacolus columbianus 3389
Hexarthrum thujae 998
Hirschioporus
  abietinus see Polyporus abietinus
  fusco-violaceus 3450
  laricinus 3450
Holocremnus see Olesicampe
Holotrichia (Lachnosternus)
  serrata 1041
Homadaula albizziae 5953
Hoplolaimus uniformis 826
Humicola
  fusco-atra 3084
  grisea 3084
Hylastes ater 1024
Hylobius 69
  abietis 1000, 2642, 5754, 6009-10
  radicis 1001, 4247
Hylotrupes bajulus 1465, 1477-8, 1524-5, 4747-50, 6003, 6622
Hymenoptera 1045-64, 2676-80, 4273-85, 6041-57
Hyphantria cunea 978-9, 4178
Hyphoderma radula see Basidioradulum radula
Hypoderma 3451
Hypodermataceae 3451
Hypodermella 3451
Hypomyces solani see Fusarium solani
Hypophloeus spp. 3326
Hypoxylon
  fuscum 5868
  pruinatum 865, 4135-6, 5869-70
Hypsipyle
  grandella 4218, 5974
  robusta 4218, 5974-5

Incisotermes 5046
Inonotus
  hispidus 6606
  obliquus 3166
Inosomnus rufopiceus 1805
Insulaspis juniperi 4198
Ips spp. 4256, 6022
  acuminatus 4253
  amitinus 1030, 4267, 6024
  avulsus 1027, 2662-3
  bistridentatus see Pityogenes bistridentatus
  calligraphus 1027, 2662
  confusus 1025-6, 2665-6, 4263, 6017
  curvidens see Pityokteines curvidens
  emarginata 1017
  grandicollis 1027-8, 2662-4
  pini 1017, 6023
  proximus see Orthotomicus proximus
  sexdentatus 1005, 1029, 2668, 3935, 4253, 4264
  subelongatus 907
  typographus 1005, 1030-1, 4235, 4265-7, 6024-5
Isoptera 921-2, 1527-33, 2592, 3102-4, 4751, 6623-4
Irpex flavus 1518
Ivela duripes 914

Japanagromyza viridula 2683

Kalotermes 5046
Kalotermes—cont.
  flavicollis 1533, 6546
Keithia thujina 835
Kotochalia see Cryptothelia

Lachnosterna see Holotrichia
Lachnus spp. 2167
Lambdina (Ellopia) fiscellaria 973, 4225
Lamprosema lateritialis 2621
Lasiodiplodia theobromae see Botryodiplodia theobromae
Lasius spp. 1063
  niger 6616
Laspeyresia spp. 4179
  pactolana 5954
  piperana 951
Lentinus lepideus 1488, 1517, 3088, 6543, 6592
Lenzites
  saepiaria 6598
  striata 4593
  trabea 3088, 6560, 6590, 6604-5
Lepidoptera 942-88, 2621-41, 4202-34, 5948-98
Lepidosaphes
  populi 939
  ulmi 938, 2617, 4201
Leptoglossus corculus 2610
Lepyrus palustris 5949
Leucaspis pusilla 4198
Leucodonta bicolor 911
Limnoria spp. 4744, 6610, 6613
Liparthum laurivorus 3330
Lochmaea suturalis 4239
Lophodermium 3451
  laricis see pinastri
  macrosporum 5895
  piceae 5895
  pinastri 825, 874-5, 2167, 2561-4, 3452, 4079, 4147, 5754, 5828
  pinicolum see pinastri
Luperus pinicola 4209
Lyctus spp. 1465, 1522-3, 1620-1
  africanus 1523
  brunneus 1344, 3061, 4700, 6561, 6611
  discedens 6614
  pubescens 5999
Lymantria (Ocneria, Porthetria)
  dispar 911, 916, 982-5, 2637-9, 4202, 4230-2, 5928, 5992-3
  fumida 5994
  monacha 986, 2636

Macrophoma
  chionanthi 4080
  fraxini 5903
  pinea 1539, 4122, 4335
Magdalis
  memnonia 1077
  ruficornis 3328
  violacea 3328
Malacosoma
  americanum 4222, 5979
  disstria 968, 4222, 5979-80
  neustria 982, 2637, 5861
  neustria testacea 914
  pluviale 969
Marssonina
  brunnea 877, 2569-71, 4154-5, 5404
  juglandis 824
  kriegeriana 4156
  populi-nigrae 2569
Martesia spp. 6613
Matsucoccus feytaudi 1077, 6068
Megalopyge chacona 5977
Megaloseptoria
  gemmicida 3453
  mirabilis 3453
  piceae 3453
Megastigmus spp. 5504
  pinus 4179
  rafni 4179
  spermotrophus 1060, 5931
  zwoelferi 4284
Melampsora
  allii-populina 824, 4152
  larici 4151
  larici-populina 5896
  medusae 3432, 4153
  pinitorqua see populnea
  populnea 878, 2565, 5817
Melampsorella caryophyllacearum 5866
Melampsoridium betulinum 2552
Melanconium bicolor 2676
Melanophila
  californica 1017, 6001
  drummondi 4236
  fulvoguttata 2644
  guttulata 907
  picta 991, 2595, 4237, 5943
Melanophoma karroo 3301
Meloidodera sp. 6065
Meloidogyne spp. 1068
  javanica 6066
Melolontha
  hippocastani
  melolontha 1043-4, 2674, 5928, 6038-9
Mermis sp. 5920
Merulius
  corium 5844
  lacrymans 1521, 5089-90, 6549, 6562, 6590, 6592, 6598
Mesosa myops 5861
Mesoxylon
  collaris 6619
  cylindricus 6619
Microcerotermes spp. 1797
  heimi 1797
  los bañosensis 6624
Micrococcus populi 2548
Micromalthus sp. 6585
Micronegeria fagi 5817
Microsphaera
  alni 2568
  alphitoides 824
  penicillata 824
Microstroma juglandis 824
Microtermes sp. 1529
Mikiola fagi 4286
Miramella (Podesma) alpina 5933
Monima incerta 2635
Monochamus spp. 6616
Morimus verecundus 2645
Mycenus galopus 1770
Mycosphaerella
  cryptomeriae 4080
  populi see Septoria populi
Myelophilus see Tomicus
Myrothecium verrucaria 1585
Myzocallis
  agrifolicola 935
  discolor 2616

Naemacyclus niveus 4146

Nasutitermes
ephratae 1533
exitiosus 6614
Nectria
galligena 4131
haematococca see Fusarium solani
Nemolecanium abietis 4198
Neodiprion
excitans 1049
fulviceps 1050
japonica 905
lecontei 1051, 2667
nigroscutum 1052
pratti banksianae 5980
sertifer 157, 914, 1053, 2678, 4282, 5754, 5920, 5923-4, 6052-3
swainei 920, 1054-6, 2680, 6054
Neomyzaphis abietina see Elatobium abietinum
Nitidulidae 990
Nodulosphaeria araucariae 2566
Nuculaspis abietis 5947

Oberea schaumii 6004
Obrussa ochrefasciella 949
Ocneria see Lymantria
Olesicampe (Holocremnus)
nematorum 1055
Oligonychus
biotae 4287
brevipilosus 4287
hondoensis 1072
karamatus 4287
piceae 4287
rollowi 4287
ununguis 4287-8
Operophtera 5948, 5968
brumata 974-6, 2633-4, 5920, 5986
Ophiostoma
roboris 5861
valachium 5861
Oporinia autumnala 2552, 5985
Orthoptera 4185, 5933
Orthotomicus proximus 2657, 4253

Panolis flammea 4202, 4227, 5984
Paranthrene (Sciapteron) tabaniformis 2548, 2595, 2622-3, 4204, 5950-2
Paratetranychus
hondoensis see Oligonychus hondoensis
rollowi see Oligonychus rollowi
ununguis see Oligonychus ununguis
Paratylenchus projectus 6060
Paropsis atomaria 4240
Parthenolecanium see Eulecanium
Pemphigus spp. 2598
Peniophora
gigantea 1539, 5837
pseudopini 2509
Pentarthrum huttoni 1586
Perga affinis 4240
Peridermium
filamentosum see harknessii
harknessii 865, 4140, 5874, 5880
pini see Cronartium flaccidum
stalactiforme see Cronartium stalactiforme
Pestalotia spp. 3084, 4734
melaleucae 4080
Petrova see Rhyacionia
Phacidium infestans 831, 2167, 3504
Phaeocryptopus
gaeumannii 2567
nudus 2567
Phaeoseptoria eucalypti 2573
Phalanta phalantha aethiopica 2632
Phellinus
igniarius 1563, 4112
tremulae 1563, 4088, 4112-3, 5844
Phenacaspis pinifoliae 4196, 5945-6
Phialophora sp. 5844
Phloeosinus baumanni 4268
Phloeomyzus
passerini 2598
redelei 5943
Phoma sp. 3084
glomerata 2505
Phomopsis
macrospora 2544
samarum 5903
Phoracantha
semipunctata 4241
synonyma see Trypocaria solida
Phyllacteria
corylea 2568
guttata see corylea
Phyllophaga (see also Holotrichia) spp. 6040
rubella 2675
Phyllosticta
fraxini 5903
gaultheriae 4080
trochodendricola 4080
Phylloxera
coccinea 4197
glabra 4197
Physokermes piceae 4198
Phytobia setosa 2684
Phytophthora sp. 1068
cambivora 179, 2528
cinnamomi 179, 852, 2502
parasitica 4119
Pinnaspis buxi 940
Piptoporus betulinus 6597
Pissodes
alascensis 4248
engelmanni 1002
notatus 1077, 2442, 5955, 6011
pini 3935, 6012, 6014
strobi 1003, 2653-4, 3402, 4249-51
validirostris 477, 4252
Pityogenes
bistridentata 6015
quadridens 4253
Pityokteines curvidens 6029
Plagionotus detritus 5861
Platypus
biflexiosus 3329
heterodoxus 3329
sulcatus 6035
Plemeliella abietina 5504
Pleospora herbarum 5903
Pleurotus
ostreatus 3193, 4736-7, 4740, 5850, 6606
salignus see ostreatus
Podacanthus wilkinsoni 2609
Podesma alpina see Miramella alpina
Pollaccia
radiosa 2545, 2572, 4157, 5900-1
saliciperda 2545
Polygraphus formosanus 5049
Polyphylla fullo 1042
Polyporus
abietinus 3450, 4088,
Polyporus — cont.
adustus 1585, 4779, 6599
circinatus see tomentosus
coccineus see Pycnoporus coccineus
hispidus see Inonotus hispidus
schweinitzii 2024, 5845, 5851
tomentosus 4114-5, 5846-7
versicolor 1370, 1517, 1585, 3092, 4731, 4737, 4740, 4779, 6549, 6590-1, 6596, 6604-5
Polyscytalum fecundissimum 1770
Polystictus
abietinus see Polyporus abietinus
sanguineus see Pycnoporus coccineus
triqueter 2508
versicolor see Polyporus versicolor
Pontania proxima 6055
Poria
carbonica 3065-6, 6559
incrassata 6609
microspora see monticola
monticola 3065, 3088, 6543, 6605
obliqua see Inonotus obliquus
vaporaria 1488, 1517, 6560, 6592, 6598
weirii 850, 4116, 5848
Porthetria see Lymantria
Pratylenchus
brachyurus 1071
penetrans 4120, 6060
Pristiphora erichsonii 1057-8, 4283, 5920, 5927, 5980
Prodenia (Spodoptera) litura 980
Pseudohylesinus nebulosus 1032
Pseudomonas spp. 2548
azadirachtae 5897
pini 2546
syringae 2547, 4132 (see also Aplanobacter populi)
Pseudoxiphydria betulae 2676
Pullularia pullulans see Aureobasidium pullulans
Pycnoporus coccineus (Polystictus sanguineus) 4593, 6602-3
Pyemotes spp. 1007
Pyrrhocoris apterus 5934
Pythium spp. 4083-4
irregulare 826, 828
mammillatum 828
sylvaticum 4091
ultimum 826, 828, 4086

Quadraspidiotus see Aspidiotus

Radulum
hydnus 839
orbiculare 839
radula 839
Reticulitermes 5046, 6623
flavipes 3098, 3104
lucifugus 1533, 4751, 6546
Retinocyclus abietis 2509, 4090
Rhabdophaga saliciperda see Helicomyia saliciperda
Rhizina
inflata see undulata
undulata 2525, 4117, 5851
Rhizobium spp. 507, 824, 828, 1585, 4090, 5824
Rhizocalyx abietis see Rhizothyrium abietis

Rhizoctonia
dichotoma 5824
endophytica 5824
solani see Thanatephorus cucumeris
Rhizophoma 5198
Rhizosphaera 5198
kalkhoffii 5895
Rhizothyrium abietis 5894
Rhyacionia (Evetria, Petrova)
buoliana 953, 2624, 4206-10, 5920, 5924, 5955-7
frustrana 954, 1798, 2625, 4206, 4211-2, 5652, 5958
resinella 2626, 5955
rigidana 1798
subtropica 1798
Rosellinia
aquila 4093
herpotrichioides 4093
thelena 4093
Rotylenchus reniformis 1068

Saccardia quercina 2568
Sacchiphantes see Adelges
Saperda (Anaera)
calcarata 5949
carcharias 2646-7, 4242, 5950, 6005
concolor 6004
populnea 6006
Sarcophaga aldrichi 968
Saturnia pavonia 976
Schizolachnus piniradiatae 936
Schizophyllum commune 1539, 3081, 4733
Sciaphila duplex 2627
Sciapteron see Paranthrene
Scirrhia
acicola 832, 3779, 4091
pini see Dothistroma pini
Scleroderris
abietis see lagerbergii
lagerbergii 854, 2167, 4291, 4121, 5170, 5852-3, 5867
Sclerotium bataticola 5825
Scolytidae 5050
Scolytoidea 3329-30, 5049
Scolytus spp. 3328, 6030
multistriatus 1033-6, 2671-2, 4269, 6031-3
nakanei 5049
scolytus 1027, 2670, 4270-1, 5854
ventralis 6034
Scopellopsis dalbergii 4150
Semiothisa liturata 5926
Sepedonium sp. 3084
Septoria populi 824
Serropalpus substriatus 4236
Shirahoshizo rufescens 2643
Sirex spp. 4274
juvencus 6015
noctilio 1045-7, 3533, 4275-8, 6015, 6041-5
Sitophilus zeamais 6614
Sphaeroma spp. 4744
Sphaeropsis sp. 2504
ellisii see Macrophoma pinea
Sphaerostilbe repens 2514
Sphaerotheca lanestris 2568
Sphecia (Aegeria) tibialis 5949
Sphinx ligustri 976
Stachybotris atra 3084
Stemmatophora resectalis 5976
Stemphylium sp. 3084
Stenopterus flavicornis 5999
Steraspis speciosa 6002
Stereum
hirsutum 1517, 4779, 6606
purpureum 1564, 4779
sanguinolentum 851, 4097
Sternocera aurosignata 993
Sternochaetus see Cryptorrhynchus
Syngenaspis parlatoriae 4198
Syntexis libocedri 4273

Teleia lucellana 5968
Teredinidae 4742
Teredo spp. 3099, 4744, 6610
Tetyra
bipunctata 2610
punctata 923
Thanatephorus cucumeris (+Rhizoctonia (Corticium) solani) 828, 4084, 5820, 5823-4
Thaumetopoea
pityocampa 987-8, 2639-40, 4233-4, 5754, 5995-7
processionea 5998
wilkinsoni 2641
Thecobius spp. 2598
Thecodiplosis
brachyntera 853, 5754
japonica 1066
Thelephora terrestris 825, 1988
Thera juniperata 5987
Threnetica lacrymans 4244
Thysanoptera 4293
Tinocallis 937
Tomicus (Blastophagus, Myelophilus)
minor 4253
piniperda 1077, 1689, 2642, 4253, 5955, 6015, 6027-8
Tortrix viridana 916, 961, 2629-30, 5968-71
Toumeyella numismaticum 2607
Tragosoma depsarium 6616
Trametes spp. 6594
gibbosa 6106
hirsuta 6606
hispida 5849
pini see Fomes pini
radiciperda see Fomes annosus
trogii 4741
versicolor see Polyporus versicolor
Tranosema arenicola 956
Tremella albida 1585
Tribolium confusum 6614
Trichiocampus populi 6056
Trichocladia robiniae 824
Trichocladium canadense 4720
Trichoderma spp. 1585, 5836,
viride 4732, 5833-4, 5837, 6599-601, 6605
Trichodonis spp. 1068
Tryphocaria
acanthocara 2600
solida 2600
Trypodendron (Xyloterus) lineatum 1038, 2673, 3331, 4235, 4272, 4948, 6014
Tubercullariella ips 1027
Tylenchus emarginatus 1070, 6060
Tympanis hypopodia 2509
Typhlochaeta sp. 2568
Typhlocybinae 925

Uncinula aceris 824
Uredo
apacheca 3454
cupressicola 2542
Urocerus spp. 4274

Venturia
chlorospora see Pollaccia salicicperda
macularis see Pollaccia radiosa
tremulae see Pollaccia radiosa
Vermicularia dematum 5903
Verticicladiella wagenerii 2526-7
Verticillium 2475
alboatrum 4125
dahliae 4120
kubanicum 5861

Xanthomonas juglandis 879
Xenocnema spinipes 1805
Xeris spp. 4274
Xestobium rufovillosum 6618
Xiphinema americanum 1068
Xyleborus
eurygraphus 1039
jaintianus 3329
xylographus 6015
Xylophaga dorsalis 3100
Xyloterinus politus 1040
Xylotrechus antilope 5861

Zeiraphera (Semasia)
diniana 1151, 4213, 5959
griseana see diniana
Zelotypia staceyi 2600
Zootermopsis 5046
angusticollis 1533

SUBJECT INDEX

Abscission see **Phenology, leaf fall**
Accidents and their prevention 665-8, 2359, 3927, 5676, 5679
  analysis of causes 666, 668, 2359
  in logging 666, 668
  in sawmilling 1418
  in woodworking 1418
  manual 1418
  safety regulations 3927
Acclimatization see **Atmospheric relations & acclimatization**
Accountancy 1189, 1192, 2835-39, 6210
  comparison of methods 2835
  see also **Cost accounting**
Acoustic properties of wood 1265-6, 1543, 4534, 6311
Adhesives see **Glues**
Administration see **Forest administration**
Aerial photography
  bibliography 2793
Afforestation 571-581, 2265, 3834-3844, 5583-5596
  agricultural land 3806, 4928, 5583, 5651
  alluvial waste lands 1977
  avalanche defence 2417
  catchment areas 1794
  choice of species 233, 421, 423-4, 439, 584, 5032, 5594
  degraded soils 584
  dry to arid sites 263, 2144, 3844, 5593, 5595-6, 5648, 6817
  economics of 3679
  eroded sites 579, 3798, 3844, 5589-90
  erosion control 1795, 3896, 5045, 5651
  exposed sites 424
  flood control 5649
  flood-plain embankments 3896
  grassland 4923, 5443
  heathland 5422, 5569
  karst sink holes 5569
  lake deposits 2002
  peatland 572-3, 589, 3836, 5582, 5612, 5619
  pseudogley 3835
  pulpwood production 3682
  saline soils 263, 5592
  sand dunes 578, 3842-3
  sand fixation 577
  savanna 2155, 6851
  scree 421
  spoil mounds etc. 574-6, 2265, 3857-8, 3840, 5584-5, 5651; p. 378 (Great Britain)
  stabilizing stream banks 571
  steep slopes 581
  steppe 637, 3899, 4851
Age of trees
  determination 2750-1, 4366
    by pith nodes 4368
    by stem analysis 4368
  determination in trees without regular annual rings 1116, 4367
  effect on
    pulping qualities 2895
    wood properties 1266
  records of exceptional age 3181
Agri-silviculture see **Intercropping, Shifting cultivation, Taungya**
Air
  CO_2 concentration 3248, 3297
  effect of forest on composition of 19
  microbial contents 19
  temperature 3253
  see also **Atmospheric pollution, Microclimate, Temperature**
Aircraft, use in forestry 594, 1195, 4039, 4041, 4046, 6781
  airfield sites 2843
  for delivering fire retardants 4045
  for prescribed burning p. 378 (Australia)
  spraying fungicides p. 202 (New Zealand)
  see also **Sowing, direct, Fire control, Fire fighting, Helicopters, Insect pests, Weedkillers, application**
Alcohol from wood see **Hydrolysis**
Alkaloids, see **Chemical constituents of plants**
Allelopathy 96, 304, 305, 1832, 2014-7 3576, 3697, 5302
Altitude
  effect on
    increment 2074, 3519
    lammas shoots 2051
    phenology 2074
  relation to phenology 3519
  see also **Provenance, Races, Timberlines, Vegetation types**
Amber 657
Amelioration of forest sites 574, 582, 5597
Amenity value of forests 1685, 3210, 6776
  choice of species 3212
  see also **Nature conservation, Recreation**
Amphibious vehicles 5747-8
Anatomy, plant
    effect of
    growth regulating substances 1906
  see also **Leaf, Shoot, Wood &c., and Morphology**
Angle-count
  bibliography 4300
  corrections for edge effect 2698
  instruments for 1084, 2695
  theory of 2695-6
  use in increment studies 2777
  use of nomograms in the field 2695
  use to determine volume 4309
  vs angle summation method 2697
  vs. fixed plot 2696
  see also **Basal area, Relascopes**
Animal damage 884-1072, 2577-684, 4162-288, 5911-6066
  see also **Birds, Insects, Mammals**
Annual rings see **Rings, growth**
Anthracnoses 876, 4158
Antibiotics 305
Ants 6616
  chemical control 1063
  collection by portable aspirator 5051
  damage to trees 1063
  damage to wood 1063
Ants—cont.
  distribution 908
  predation on insect pests 908, 5051
  symbiosis with aphids 2603
  transference of colonies 909
  see also **Predators of insect pests**
Apiculture 79, 3924
  as pollinators 3591
  pasture 5678
  poisoning by pesticides 3324
  species for 5678
Arboreta &c. 3757, 3903-5
Arboricides see **Poisoning of trees**
Arboriculture see **Ornamental trees, Street trees &c.**
Arid zones
  ecological studies 4947
  land use 4922
  phenology of exotics 309
  species trials 4947
  see also **Afforestation**
Aromatic plants see **Oils**
Aspect 1119, 3273
  effect on
    insolation 1736
    microclimate 27
Assimilation see **Physiology**
Associations, forestry 9, 1715; p. 569 (Brazil)
  pulp and paper industry p. 379 (Sweden)
Assortments 4332, 6670
  assessment in standing trees 4331
  choice of markets for 2830
  determination 1103
  optimum combinations 2728, 2814
    for transport 4438
  relation to percentage of defect 6655
  relation to type of defect 6655
  relation to vegetation types 4333
  tables 2689
  yield 1675, 4398
  see also **Volume tables**
Atmosphere see **Air**
Atmospheric pollution 766-73, 2434-2440, 4017-24, 5765-8
  conference on 1881
  damage
    assessment of 766, 5767
    dwarf growth 4022
    leaf 4020, 4024, 5767
  diagnosis 4017
  dusts 1695
  effect of
    fertilizers on SO_2 uptake 769
    fluorine 4022
    ozone 6069
    SO_2 4018-21, 5767-8
  effect on
    chemical composition of needles 4019
    foliage 771
    forests 5765
    ground vegetation of clear felled area 4023
    increment 766, 770, 772, 5619, 5767
    insect pests 2440
    leaf temperature 773
    mycorrhiza 2438

Atmospheric pollution—cont.
pH of humus layer 5619
plants and soil
review 2434
soil fauna 49
wood anatomy 4022
filtering effect of forest 1695, 4023, 5765
from
aluminium works 4023
ammonial fumes 1075
bitumen installations 2437
burning bark 4829
fertilizer factory 770
henhouses 1075
incinerators 6537
slash burning 2472
smelting 773, 5767
smoke 3995
indicator plants 2434
physiological effects 767-8, 4020-1, 5768
pollen causing hay fever 4980
relation to temperature inversion 4024
research 1881
resistance
breeding for 1881-2
effect of fertilizing 2439
measurement 2436
testing 4018
resistant species and individuals 4018, 4024, 5767
Attractants see **Insect pests**
Auerwald see **Vegetation types, Floodplain forest**
Automatic data processing 4978
Automation see **processes concerned**
Auxiliary species see **Nurse and auxiliary species**
Auxins see **Growth-regulating substances**
Avalanches 3254, 4011
effect of forests 6803
protective works 2417
simulated 5043
Axes 3960
work study 5710

Bacteria 4293
antagonistic to fungi 5278
attack on wood 3083, 6585-6
associated with cankers 4132
associated with rot fungi 1515, 4097
composting, use for 1630
effect of foliage volatile substances 4182
in decay-free wood 4096
in decayed wet wood 4097
in living trees 2511, 4096
in pulpwood chips 4779
in soil 5022-3
inhibition of fungi 4779
mutations 911
taxonomy 855, 879
Bacterial diseases 5813
of insects 911, 979, 1051, 4182, 5979
spray suspensions, 1051, 2630, 4180, 4234, 5971
standardization 912
of plants 855, 860, 879, 2495, 2533, 2547-51, 4074, 4133, 5897
Balsam see **Oleoresin**
Bamboo(s)
anatomy 6686
boards 4822
borers, protection from 4746
chemical composition 6686
density 6686
fertilizing 604
harvesting 3923, 5670
management 5670
plantations 659
propagation, vegetative 3786
pulping 659, 1570-1, 1583, 6686
taxonomy 1917-9
yield 3923
see also **Species Index**
Bark 1627, 6268
anatomy & morphology 866, 4527, 5191, 6674
chemistry 1346-7, 1353, 1628, 1632-4, 2587, 3162-5, 4833-4, 4836, 5059, 6395, 6743-9, 6755-7
see also **Tannins**
destructive distillation 3156
diseases 837, 2618, 6071
see also **necrosis, Cankers**
expansion values 6324
extractives 1626, 1633-4, 3164, 4831, 4833, 4839, 6383, 6390, 6743
heritability of characters 3433
indication of wood properties 4526
inhibitor of spore germination 4136
insect pests 1006, 2655-6, 2663
microrelief 6084
moisture content 2587, 6082
necrosis 872-3, 1844, 2686, 4292, 5872
percentage 2700
weight vs volume 1090
physical and mechanical properties 6324
pulping 1090
thickness 2700, 4314, 6082, 6090, 6092
distribution along stem 1089-90, 2701
effect on insect attack 2664
measuring gauge 2699
relation to provenance 4303
types 158
uses 1625
building blocks etc. 6704
chemical 3165
composting 1630
filler in field tile draining p. 379 (U.S.A.)
general 4829, 6739
medicinal 4527
particle board 1616
pulping 2701
soil improvement, mulch &c. 525, 1631, 3769-71
volume 2701
determination 6083
weight 2701
see also **Cork, Insect pests, Phloem, Tanstuffs**
Barking 1375-6
broadleaved species 2996-7
chemical 2366
cleft pulpwood 694-5
costs 1187
economics of 695, 1187
hand vs. machine 663
losses 6117
Barking—cont.
machines 694-5, 2997, 3025, 6117
'Bezner' 5704
'Cambio' 1187, 5704
combined with cross-cutting 696
economics of 5704
Eger 694-5, 5703
electric 3947
feeding devices 2996
motorized hand barkers 695
rotor-type 693
testing 5703
VK-16 5703-4
pneumatic 1375-6
pulpwood 1187
resistance 3946
work studies 2997, 3946
Basal area
calculation
elliptical section 2694
errors 2693-4
determination
angle count 6077
caliper vs tape measure 1083
point-centred quarters 1102
ideal 2309, 4350
relation to
volume 6086
volume increment 2777
see also **Increment, Stand density, Thinning**
Beams
box 1448, 6523
laminated 1434-6, 1438, 6514-7, 6521
loading 1310
plywood 1448, 3053, 6523
pre-stressed 1439, 6516
reinforced 1437
span/depth rates 6520
testing 1310, 1435, 1437, 6516-7
see also **Laminated wood, beams**
Bearings and bushes, wood in 3054
Beavers
damage 890-1
Bees see **Apiculture**
Bending, wood 6483
bending properties 1409
pretreatment 3028
veneer 4660
Berries 650, 8581
Beta rays see **Radiation, ionizing**
Biochemistry
soils
textbook 3271
see also **Chemical constituents of plants, Enzymes, Growth-regulating substances**
Biogeocoenosis see **Synecology**
Biological drying see **Sour-felling**
Biometrics
textbook 6072
Birds 3200
artificial nest sites 5054
biology, textbook 71
cover for 5556
damage by 4172, 5813
food 75, 5053
gamebirds 74
management 74, 1806
legal protection p. 782 (Italy)
migrant songbirds p. 782 (Italy)
nesting boxes 910, 5053-4, 5928
nest holes 5054
nutcracker 2039

Birds — cont.
predation on
insect pests 910, 5053, 5928
repellents 3748
sap-suckers 4172
seed dispersal 2039
symbiosis in 70
water-fowl 2298
woodpeckers 4260
see also **Insecticides, effects on birds**
Bituminous emulsion see **Mulching**
Bleaching of wood 3080
Blockboard 1431, 6512
testing 6368
Blue-stain see **Stain**
Boar, wild see **Pigs**
Boats and ships
use of improved wood 4710
Bogs 5040
drainage 341-2, 3857
forest interrelationships 274, 5640
microclimate of 26
see also **Palaeoecology**
Book-keeping see **Accountancy**
Borers, wood 1010, 1502, 1522-6, 3096-101, 6610-22
ants 6616
attack on dead trees 6003, 6021
attack on living trees 2600, 4244, 6003
attack on paper 1586
bibliography 4718
biological studies 1522-23, 3331, 6615, 6619
control 6619
chemical 1477-78, 3055, 4235, 4272, 4750, 6617, 6620; p. 569 (Great Britain)
fumigation 4749
heat treatment 6614
leaching sugars from bamboo 4746
digestion of wood by 6615
distribution 4243, 4274, 6003, 6622
effect of
barking 4272
moisture content 1525
season 1344
seasoning 1525
starch content 1344, 1523
weather 4235
wood extractives 1523
effect on grade 4272, 4745, 6621
host specificity 3101
in buildings 4691, 6618
in building timbers 6619
in footbridge 6616
laboratory rearing 4236
nutrition 1324, 1523-4, 4747-8
symbiosis in 70
temperature requirements 4748
see also **Marine borers, Preservation, wood, Storage**
Botany
economic
see also **Minor forest products**
ethnobotanical studies 1624, 1652
systematic 194-227, 1911-35, 3448-99, 5196-5232, 6270
chromatographic methods 3175
relation to wood anatomy 4503
Box(es) see **Packing containers**
Bracken
as site indicator 6140
Bracken — cont.
biological control 5795
chemical control 813-4, 2479
reproductive behaviour 2019, 2020
sporal regeneration after fire 2019-20
Branches
decorative 3908-9
development
cuttings vs. seedlings 5564
growth characteristics 329, 5153
growth stresses 320
self pruning 322
size 322
volume 6090, 6092
see also **Epicormics, Habit of growth, Trimming**
Branching
habit
indication of wood properties 2930
Branchwood see also **Volume**
Brashing see **Pruning**
'Braunfleckengrind'
associated with
thrips wounds 4293
Breeding, tree 145-92, 608, 1866-1905, 3401-3444, 4944, 5145-5195, 5400, 6781
anatomical studies 153
assessment of genetic gain 152, 154, 3429
clonal trials see Clones/trials
conferences 1866-7, 3402, 5158
criteria for selection of material 153, 3414, 3416, 3424, 3727, 5157
early selection 1898
experimental design 464
for
dry matter production 1142
form 1894
genetically superior planting stock p. 783 (U.S.A.)
improved growth rate 2175, 3443, 5177
insect resistance 3402
low epicormic branch potential 5322
low toxicity 1905
pulping qualities 1870, 3431, 3443, 5160, 5180
resin production 5659-60
resistance to
atmospheric pollution 1881-2
cold 3439
disease 165, 179, 2535, 2555, 2571-2, 3409, 4151, 5158
drought 3441
frost 3426
insect attack 5158
rust 3431
seed production 167, 171, 2175
site type 466
straight grain 4525
wood properties 1370, 1887, 1894, 3402, 3404, 3414, 3431, 4601, 5157-8, 5161
methods, review of 146, 3430
mutations
induced 3430
spontaneous 3430
progeny testing 147, 154, 172, 458-9, 1869, 1880, 5158, 5177
Breeding, tree — cont.
age for evaluation 1893
programmes 166, 3403, 3442, 5491
resistance to
disease 2475
review 1900
selection 5148
selection of phenotype 457, 479
selection of plus trees 3425
selection of superior tree 5158
selfing 5150
vs. out crossing 5159
use of ionizing radiation 156
see also **Clones, Cytology, Genetics, Hybridization, Hybrids, Pollen, Pollination, Provenance, Races, Seed, Seed orchards, and Species Index**
Bridges
exchangeable components 751
forest 3992
in tropics 3992
prefabricated reinforced concrete 751
Briquettes see **Charcoal, Waste wood**
Brittle heart 4783
Brooming see **Witches brooms**
Browse plants 76, 3900, 5060, 5095
foliage of
cutting vs seedlings origin 5564
in forest openings 5061
see also **Deer**
Browsing
damage 4171, 5911
identification of animal 5911
see also **Deer, Rabbit & Hares**
Brush control
heavy equipment 3893
see also **Weed trees & shrubs**
Brush cutters 5645
work study 3943-4
Bryoplytes see **Moss**
Bud(s) 5322-3
adventitious 5321
analysis to determine
nutrient status 5067
development 3382
differentiation 136
dormant 125, 3595, 5122
in roots 5127
effect of pruning 3888
formation 222, 329
growth regulators
effect of 126
insect pests 4285
morphology 4285
relation to cambial activity 3888
scales 1932, 3382
size
relation to increment 3605
see also **Pruning, bud**
Budding see **Propagation, vegetative**
Buildings and their construction 1422-55, 3049-53, 4679-84, 6520-30
calculation of stresses 1451, 4681
composite construction 3047
decking 1442
decorative panelling 1213
design 1445
deterioration of timbers in 4691
exterior wooden facings 3014
farm buildings 3053
fire regulations 1497
fire risk 1497, 6513; p. 201 (Canada)
forest villages 2413

Buildings and their construction—cont.
housing guide
bibliography 6519
hurricane-proof houses 6531
light framing timber 4681
manual of timber design 6518
marine construction 6531
plywood 3047
pole structures 4680, 6531
preservative treatment in situ 4691
regulations 1444, 1446
research 1451, 3050, 4535-6
roofs 1450-51
shuttering 1366-7, 6412
specifications 1443, 1447
standards of performance 1445
temperature
analysis of heat flow 4536
gradients 4535
timbers for 1213, 4679
timber-frame buildings 1447, 6519
guide for use 1444, 1446, 3048
trusses 1442, 1447, 1449, 3050, 4682, 6524-6
use of
bark 6704
plywood 6522
wood
textbook 6518
wood-brick paneling 3051
wood-wool building slabs 4808, 6705
wooden jackets for steel girders 3049
see also **Beams, Borers, Connectors Decay, Engineering, Floors, Grading, Houses, Joints, Laminated wood, Roofs, Walls**
Bulldozers 5686
Bundling
calculation of length of bindings 2412
cordwood 702
equipment 702
work study 3970
see also **Floating, Skidding**
Burning see also **Fire, Afforestation**
Burning, prescribed 794-5, 2472-4, 4049-53, 5792-3
aircraft, use of p. 378 (Australia)
efficiency assessment 2454
for
site preparation 410, 794-5, 966, 2126, 2129, 3672, 5792-3
disease control 4091
fire danger reduction 794, 2451, 2453-4, 2471, 4034, 4051-3
forage improvement 3842
slash disposal 2474
stand control 2099, 5793
thinning 3880, 4052
understorey control 5793
weed control 623
incendiary bombs for 4049, 5792
meteorological conditions 794, 2454, 4053
planning 4053
policy 4033
sprinklers, use of 4050
see also **Slash disposal**
Bushes see **Bearings and bushes**
Butt rot see **Root and butt rots**

Cableways 705-14, 3971-4, 5723-31
accidents 5727
Cableways—cont.
brakes 713
cables & accessories 706, 708
cable reeling device 714
calculations of cable strength & c. 707, 3972-3, 5727, 5730
carriages 5731
Ciucaş 706
economic factors 709, 710, 712, 5728
integration with road system 708
in torrent and avalanche control 709
lay-out 708, 3971
'Ropeway Harvester' 3972
sky-line 705, 712, 3973
sky line cranes 709
types 709
use in inundated areas 711
vibration 5729
work study 664, 710
Wyssen 707
Calipers
prism 2692
Cambial activity
computer model 6280
effect of bark on 2890
effect of chemical constituents 3447
effect of dis-budding 3888
relation to season 2925
relation to spiral growth 2914
relation to transpiration 1841
Cambial area 6073
Cambium
cell differentiation 97, 131, 2889
marking 6279
cell division 1237, 2889, 4513
chemistry 122, 3359
respiration 1845
see also **Wood anatomy**
Canal plantations
see also **Fuel plantations, Irrigated plantations**
Canes see **Rattans**
Cankers 860-73, 2533-51, 4130-43, 5862-85
artificial inoculation 2534, 2544, 4138
bacterial 2546, 2549-51, 4132, 4133
control 5866, 5869
development 4138
distribution on stem 5866
effect of position in stand 5867
effect on extractives 5862
exudations from 861
histopathology 5872
host resistance 2534
incidence 5866
rate of growth 4135
relation to
bark characters 3433
nutrition 861
rooting 861
season 2544
site quality 2514
stand density 5870
temperature 2543-4, 5871
topography 3683
see also **Rust diseases**
Canopy
effect on
browse 3341
relative humidity 27
relative illumination 27
Canopy—cont.
temperature 27
see also **Crown cover**
Carbide-tipped tools see **Saws, milling, Woodworking, machines and tools**
Card-sorting methods
in synecological analysis 5345
in timber identification 2877
see also **Keys**
Catchment areas
afforestation 67
calibration 1787
contour terracing 67
effect of felling on 273, 3322-3, 5276
hydrological research 65, 1780, 1786-8, 1790-1, 3315-6, 4944, 5040
management 59, 1280, 1792, 1794
multiple use 1793, 3322
measures to increase water yield 64
soil surveys in 3317
Cattle
see also **Grazing and pasture**
Cell-wall see **Wood anatomy**
Cellulose
chemical properties 6411
crystallinity 2977, 4519, 4579
effect of
alkali 6379-80
fungi 1506
heat 6403
light 6411
in old wood 1372
in tension wood 1506
variation
genetic 2979
geographic 2979
with age of tree 2978
with height in tree 2978
X-ray study 2977, 4519-20, 4579
see also **Hemicelluloses**
Chamois
browse selection 893
Chaparral
chemical control
effect on
water yield 2489
Charcoal 6734
activated 3154
burning 5600
costs vs. coke 1623
metallurgical 1623
production
economics of 1623
properties 1622
see also **Distillation, destructive**
Checking in wood
effect on preservation treatment 1490
in blockboard 1431
in plywood 1430
in veneer 1430
Check lists see **Geographical index**
Chemical constituents of plants 81-98, 275, 327, 1636, 1831, 1834, 2495, 3356, 3384, 4087, 4269, 4844, 5076, 5079, 5112-4, 5275, 5328, 5352, 6030, 6395
alicyclic precursors 90
alkaloids 96, 1637-42, 3167-9, 4837-9, 6752, 6756-7
amino acids 100, 858, 1967, 3447, 3868, 4019, 4086, 4214, 5085, 5195

Chemical constituents of plants — cont.
analysis 1758, 1815
anthocyanins 3413
apigenin 6754
aromatic compounds 2475
ash 1819
biflavonyls 92, 5024
biosynthesis 90, 100
carbohydrates 4582, 5195
carotene 94, 100
carotenoids 95, 1826
chalcones 5082
changes due to fungi 5856
chromones 4598
copper 5070
coumarin 2044-5, 6747
coumaroyl-glucose esters 3357
diosmin 3358
DNA 1908
distribution in tree 1818, 5068
effect of
altitude 2074
chemical composition of host 4269
effect on bacteria 4182
effect on insects 2985
enzymes 5195
essential oils 4044
F. content 1823
ferredoxin 5071
flavanoids 3383, 5075, 5080-2
fluoroacetate 1824
glycosides 91, 4840-1, 5082
gossypol 5079, 6755
hesperidin 3358
heterosides 3358
hydrocarbons 3350, 4731
inositols 97
insect attractants 4178
insect inhibitors 4178
iodine 3348
isocryptomerin 1825
kaempferitrin 3358
kinetin-like compounds 100
latex 5195
lignin-dimers 4576
linarin 3358
lipids 93, 6770
methods of determination 82, 3352, 3354-5, 3357, 3938
methylcorydine 6756
N compounds 3538
nucleic acid 1867
oestrogens 3161
of
bark 3169, 5082
diseased plants 4016
flowers 5079
fruit 4842, 5079
leaves 3168-9, 5077
roots 3377
seed 4842, 6770
pentosans 4581
phenols 2519, 5079
phytochemical classification 4574
pigments 92, 94, 1826-7
polyphenols 1830, 5856
porial 850
proteins 1868
quercetin 6754
quercitrin 6754
quinic 90
relation to
age 3352, 3354
aspect 5852
disease resistance 858
Chemical constituents of plants — cont.
disorders 2475
flowering 5307
frost resistance 247, 556, 5258
fungal infection 2519, 4107, 4147
insect attack 1029, 2649, 4197, 5953
light 5852
provenance 3354
season 3352, 3354
site 3352
soil 1823
taxonomy 5073
rhamnetin 6754
rhamnitrin 6754
rhoïfolin 3358
saponin 3354, 6752
salt secretions 5273
sclereids 1909-10
seasonal variation 113, 1818-9, 1826, 5362
shikimic acid 90
starch 113, 1344, 5258
suberins 6741
sugars 100, 556, 858, 3447, 4086, 5083-4, 5258
tannins 6752, 6754
tembetarine 6756
taxonomic value 149, 1829-30, 3174, 3350-5, 3358, 4731, 5075, 5078, 6741
terpenes and terpenoids 88, 149, 1029, 1649, 3378, 5077, 6745-6
see also **Resin(s), chemistry**
trace elements 1820, 5066
variation 1827
waxes 3350
xanthophylls 5253
see also **Bark, Chlorophyll, Foliage, Growth-regulating substances Lignin, Nutrients, Oils, Seed, Tannins, Turpentine, Wood chemistry and Species Index**
Chemical utilization of wood 1414, 1568
effect on wood 1361
Chemicals, resistance of wood to 1361
Chemotaxonomy see **Chemical constitutents of plants, Wood chemistry**
Chipboard see **Particle Board**
Chippers 3025
combined barker—chipper 2394
combined sawing and chipping 4653-5
cutting speed 2651
disk-type 4651
evaluation of efficiency 4810
mobile 2395, 6468-9, 6471
mobile mills vs permanent mills 1404
profiler 4653
testing 6468
Chipping 1403, 1551, 3025, 4651, 6469-70
in the forest 2379-80
optimum cutting conditions 4652
theoretical studies 1405
waste during conversion in situ vs. pulpmill 1402
Chips 4651
clearing 3131
costs 1205
decay 1552-3
floating 733
measurement of m.c. 1273
Chips — cont.
saw-kerf material 6423
storage 1402, 1551-3, 3118, 3120, 6651-2
transport 1402, 2409-10
by pipeline 5722
use of old rubber trees p. 782 (Malaysia)
see also **Particle board, Waste wood**
Chlorophyll see **Physiology, plant**
Chlorosis 762, 3361, 4016, 5248
Choice of species 231, 893, 2135-6, 3419, 3692, 3704, 3835, 5451, 5459, 5463, 5559
biological considerations 5449, 6187
economic factors 1183, 5449, 6184
fast-growing 893, 3680, 5447-8
tropical 422
for amenity forests 3212
for arid zones 236, 2144
for mountains 1171
for towns 3906
resistant to browsing 893
soil factors 5032
tolerant to atmospheric pollution 5767
Chromosomes see **Cytology**
Christmas trees 73, 926
economics vs. timber 2137
standards 5475
suitable provenances 5475
weed control 798
Cigarettes
leaf wrappers 6228, 6751
Cleanings 2261, 2300, 5626
costs 5627
economics of 610, 4432
hand tools for 5627
machines for 389, 687-8, 5627
timing 5441
with weedkillers 3875
work study 5627
Clear felling(s) 5438
effect on
forest margins 5433
hydrology 5276, 5375
nutrient loss 5276
regeneration 5433
water table 1777
width of strip 5437
see also **Silvicultural systems**
Climate 17-27, 1735-40, 3248-59, 4978-90
automatic data gathering 4978
bioclimates 22, 2146
maps 3258-9
changes in p. 379 (Switzerland)
effect on
disease 4290
increment 2266
instruments for measurement 1735, 3254
of forest regions 3505
relation to
soil formation 28
vegetation 22, 372
seasonal changes 22
see also **Dendrochronology, Drought, Forest influences, Microclimate &c. and Geographical Index**
Clones
evaluation 3717
identification 1829

Clones — cont.
management in seed orchards 2179
production of 185
trials 418, 462, 465-6, 1867, 1898-9, 3432, 3434, 3717, 3790, 5478, 6340
variation
bark 3433
dbh 3434
disease resistance 418, 858, 1867
drought resistance 1867
height growth 154, 3434
mortality 3434
physiological and morphological 186, 189, 418, 1867
snow resistance 1867
taper 1867
wood properties 6340
CO_2 exchange
effect of light 5102
Colonisation
of eroded slopes 340
Colour of wood 6310
measurement 6309
shades, sorting by p. 783 (U.S.A.)
see also **Discoloration in wood**
Colouring of wood 3030, 6627
effect of
steaming 1535, 6627
Combustion of wood see **Fire proofing, Thermal properties**
Communal forests 1190
Competition 3576
between genotypes 5148
between groups 2011
between trees 2119, 2727, 2782
between
trees and grasses 3579
effect on diameter 2119
effect on ground vegetation 301
effect on height 2119, 5585
for light 414
for water 5301, 5598
relation to wood anatomy 2891
from
shrubs 279, 302
interspecific 414, 2011, 3577, 5585
intraspecific 5300
mathematical model for 2782
measurement 3873
relation to age 2119
relation to stocking 2119
see also **Allelopathy, Weeds**
Composite wood assemblies see **Laminated wood**
Composts and composting 604, 3769, 3778
bark 1630
sawdust 1461
Compressed wood see **Improved wood**
Compression wood see **Reaction wood**
Computers, electronic 2078, 2746, 2811, 3043, 6074
programmes 1128, 1423, 1785, 2746, 2811, 2814, 3043, 3310, 4421, 4974-5, 6096-8
use in
accounting 6210
administration 6210
annual ring measurement p. 378 (Canada)
Commonwealth Forestry Institute 4950
cost control 6195
data processing 4449
Computers, electronic — cont.
ecological analysis 2078
financial maturity determination 1182
forest management 1162, 1180, 1182, 2816, 4421, 4973, 6080; pp. 209-16
forest mensuration 2708, 6096, 6164
forestry research 2688, 4973; pp. 209-16
hydrological research 1788
increment studies 1128
indexing 1707
inventory data compilation 1096, 4321, 6097-8
investment evaluation 4430
logging research 2367
policy option evaluation 6194
road survey 4322
sample plot data compilation 2721
sawmilling 1423
simulating sample plots 2723, 4326
timber sorting 2814
transport planning 2816
truss design 3050
value increment computations 2824
veneer mills 3043
volume determination 6096
water balance studies 3310
yield estimation 2746
yield table construction 2688
Concessions and licences
'pulpwood harvesting areas' 6845
Conductivity of wood see **Electrical, and Thermal, properties of wood**
Cone(s) 3726
anatomy 5192
collection, storage &c. 482, 3732
crop, estimation of 5487
development 117, 5487
diseases 2576, 5902
maturity 482-3
morphology 201, 1865, 5139, 5141
taxonomic importance 5140
opening 3408
pests, insects 2589, 2610, 4179
production 3585, 5493
effect of
climate 5488
drought 2037
fertilizing 5495
lopping 5492
stand density 5492
forecasting 2035-6, 5486, 5487
on grafts 5492
relation to age class 5486
relation to nutrition 117
relation to pollen parent 5492
ripening 3585
squirrel damage 409
storage 199
yield of seeds 3408, 5140, 5158, 5493
see also **Seed**
Conferences, symposia &c. 1716, 2859
aircraft in forestry 4451
Commonwealth Forestry Conferences 3216
ecology, alpine 2074
fertilizers 595
financial management 4428
Conferences, symposia &c — cont.
fire control 4032
fire ecology 4033
forest economics 1189
forest engineering 3989
forest history 3181
forest industries integration 4468
fungi 3166
genetics 1866
Indian silvicultive 6844
insect abundance 5052
IUFRO 3234, 4958
land use for forestry and agriculture 4921
management 6174
mensuration 6074
National Eucalyptus Day p. 379 (Rome)
nature conservation and recreational activities 4911
nursery practice 2196
nutrition 5619
plant gene resources 5146
plantations 4956
productivity in forestry 6173
propagation of woody species 524, 3757
public relations 6830
pulp and paper 6674
pulping of Eucalypts 3137
recreation 3200
regeneration, natural 5429
Savanna development 6851
Scots pine
management etc 5235, 5401, 5619, 5754, 6176, 6850
site quality mapping 4976
soil bacteria, ecology 5021
termites 3103
timber engineering 3047
tree breeding and genetics 3402, 5158
weed control 626, 5604
wild life in the forest 3200, 3334; p. 379 (Africa)
wood anatomy 6674
wood marine piling 6496
wood preservation 3055
wood research p. 201 (international)
Connectors, timber 1393, 1395, 1442 3014, 3053, 6446
nailed 1394
nailed plate 6438
relation to design loads 6439
Contour ridging, trenching etc. 3844
Conversion 2114, 5418, 6185
broadleaved species to conifers 623, 4912, 5418
ecological effects 4912
conifers to mixtures 5419
coppice to high forest 397
coppice-with-standards to high forest 5417
degraded forest 396, 585, 2117-8, 3723, 3893-4, 5421-2, 5647
even-aged to uneven-aged 5419
maple sugar to timber production 5423
natural to managed forest 5413, 5415
natural forest to plantation 6185
of low value stands 623, 3680, 5418, 5420
period 1180
pioneer stands 575, 5421

Conversion — cont.
pure to mixed stands 397
to two-storeyed stands 5370, 5422
uniform to selection 1140
see also **Enrichment, Interplanting**
Conversion tables and factors 1109-10, 2709, 2734, 2736
Cooperage 1480
Co-operatives 1704-5, 4935, 6239 6829
Copal 657
Coppice
economic aspects 2115, 3961
felling with power chain saw 3961
increment and yield 4401
management 2115-6, 5407, 5417, 5445
rotations 2115
see also **Conversion, Silvicultural systems**
Coppicing see Regeneration, natural
Cordwood
handling 6646
transport 6646
volume determination 2734, 2736
Cork
as core for plywood 6513
chemistry 1632, 6741
decomposition in the soil 3285
from species other than Q. suber 6741
growing 6206
wax from 6742
yield 6206
see also **Species Index (Quercus suber)**
Corrosion of metal by wood 1360, 3153, 4705, 6404, 6735
Costing 2836
logging operations 2832, 5690, 6209
sawmilling 1403
Costs
barking 1187
chemical weed control 2483
comparisons
international 2836-8
regional 2838
establishment 2836
in mountain forests 1172
logging 2402, 5690
clear felling vs. selection felling 2833
machinery 4437
tables 1093
of cockchafer control 6038
protection 3996
rooted cuttings of ornamentals 3781
symposium on 2836
tending 4432
thinning 2389
timber production 4433
control 6195
transport 2836, 6241
trends 4445
weed control 3846-7
Cranes
tractor-mounted 5741
Crates see **Packing containers**
Credits 6828
text book 1192
Creep in timber 1286, 1309, 2941, 4565-6
anisotropy 1308, 1310
effect of
temperature 1312
Creep in timber — cont.
methods of determining limits 4563
relation to vibrational properties 4564
Crosscutting
automation 697, 1386, 4627
axe vs. saws 3965
combined with barking 696
damage to wood 5712-3
felling site vs. landing 5701
frozen logs 5712
hydraulic shearing 5713
log support 683
saws 5705
theoretical studies 5712
with harvester 2397-8, 3966
with shear blades 5714
without measuring 5695
work study 1386, 3942-4, 3954, 3965, 5701, 5712-4
Crown
classes 2737
relation to
increment 6150
wood anatomy 4604
density
relation to
increment 6150
development 3649, 6150
relation to ring growth 4606
diameter
distribution in stand 6073
relation to
d.b.h. 1120, 2738, 4340-1, 6125
height and volume 4412
expansion after thinning 318
form 4342, 4412
characteristic of different ages 4342
effect on increment 6159
expression of growth potential 617
length 2737
relation to
age 323
stand density 323
stand height 323
measurement 4343, 4348, 6112, 6126
on air photos 4410
openness 6128
projection
relation to form factor 2690
relation to
growing space 2690
increment 2754, 5325
stand density 566
wind resistance 3649
weight 2446
relation to tree height and diameter 4352
Crown cover
relation to volume increment 6177
see also **Canopy**
Cruising see **Enumeration surveys, Volume**
Cultivation, soil 476
double digging 475
effect on
fertilizing 3864
growth 3865
increment 2756
N cycle 3864
soil properties 475
Cultivation, soil — cont.
in nurseries 2209
of young plantations 2299, 5606
persistence of effects 3864
work study 5483
see also **Ploughing, Site preparation**
Cultivators
disk 5483
rotary 5483
see also **Ploughs**
Cuttings see **Planting stock, Propagation, vegetative**
CVP index 4990
Cytology 4109
chromosome
aberrant 5184, 5187-8
behaviour in hybrids 5184, 5186-7
effect of space flight 5771
numbers 192, 1903-4, 4025, 5189
volume 4025
effect of ionizing radiation 4025
karyotope analysis 190-2
meiosis 130
mitosis 131
of
germination 2043
nuclear volume 5185
plastid development 5155
polyploidy 1902, 3430, 5180
induced 1898, 3431, 4151, 5179, 5181-2, 5184, 5789
relation to taxonomy 201
sclereids 201

Damage to forests
estimation of loss 1703
illegal felling 1703
Damping-off
control 506, 4085, 4087-8
biological 5754
chemical 827, 5827
cultural 827
seed treatment 3750, 5826
soil treatment 5823
effects of
air temperature 829
date of sowing 829-30
root excretions on pathogens 4086
soil moisture 830
soil N content 830
soil temperature 830
pathogens 828, 2504-5, 4084, 4089 4092, 5823-4
relation to
nematodes 1070
resistance mechanisms 4085
see also **Nursery practice**
Day length see **Photoperiod**
Decay in trees 4096, 4114, 5844, 5846
detection 5832
entry 5575, 5830, 5850
heart rot 2509-10, 5839, 5850
in
fire-killed trees 5790
insects-killed trees 6021
rate of growth 5839, 5850
relation to
age 2510, 4101, 5839, 5841
bacteria 4097
beaver damage 891
deer barking 5575
site 4101, 5839, 5841

Decay in trees — cont.
size 4101
soil type 2510
spacing 3827
resistance, natural 2519, 4107
salvage fellings 891
spread 4098, 4106
stain associated with 2512
succession 4095
see also **Fungus diseases, Species Index**

Decay in wood 1502, 1510, 1518, 4734, 4739; p. 202 (U.S.A.)
anatomical changes 6597
assessing rate of decay 4106
bacterial 1516, 6585-6
biological control 6599
brown rot 3092, 4735
caused by fungi present in living tree 4729
cellulolytic 6607
chemical changes associated with 6597
control by radiation 3090
detection by
mechanical punch 4728
staining 6595
dry rot 3089-90
economic importance 6593
effect of
irradiation 1509
light intensity 3088
soil type 1507
wood density 4737
effect on
infrared spectra 6596
mechanical & physical properties 1517, 3092, 6592, 6598
enzymatic 4733, 6607
evaluation of extent 4727
fauna occurring in 3332
in
buildings 4691, 6609
cooling towers 4741
logs during extraction 3085
marine structures 3082
mines 6608
piles 6586
poles 4704, 6593
posts, during seasoning 1539
pulpwood 1514, 1516, 4095
chips 4095, 6651-2
measurement 4725-6
mechanism of 6596
microscopy 6581
fluorescence 6595
prevention 3085
relation to
basic density 1516
bark type 4113
coloured heart wood 4740
length of storage 6592
microflora 4096
nitrogen content of wood 6604-5
season of felling 6604
strength tests 4727
termite attack 4751
research 3081, 4094
resistance to 4113, 6587-8, 6590
soft rot 3055, 3083-4, 3092, 4695, 4705, 4751, 6600
stain associated with 4095
temperature relations 6594

Decay in wood — cont.
weight loss 6585, 6592
white rot 3092-3, 4736-7
see also **Durability, Preservation, Rot fungi**

Deer 3334
barking 895, 1809, 5056-7, 5575
protection against 894-5057
relation to
insect attack 6041
m.c. of bark 2587
tree age 895
tree size 895
species preference 5059
browse production
after thinnings 1813
browse species 893, 897-8, 1811-2, 2586, 3342, 5060
browsing behaviour 3200
browsing damage 893, 2585, 5557
control 4170
biological 5056
distribution 5916
effect of predators 5056
effect on regeneration 896, 1808, 3664
effect on vegetation 76
feeding habits 896, 898, 1809, 4169
management and control 77, 1807-8, 5057, 5916, 6803
populations 5916
provision of forage 77, 1807, 1809, 4171, 5057, 5059, 5061
repellents 2579, 5917

Defective stands, rehabilitation of 477, 3207, 3893-4, 5647
see also **Conversion**

Defects in wood 1555-65, 3121-7, 4671, 4781-5, 6654-69
assessment in standing trees 1557, 4335-6
brittle heart 6661
checks, shades and splits 3127, 4762, 4778, 6662
crook 4335
detection methods 1555, 1558, 1565, 1593, 3123, 6665-6; p. 783 (U.S.A.)
discoloration 4720
effect of
growth & locality factors 1104, 4335-6, 6654
effect on
lumber recovery 6504
forking 4335
growth stresses 1536, 4603
knots 1558-9, 3123
metal fragments 1565
pith 1247
warping 1285, 2940, 6668
see also **Cull, Decay, Discoloration, Grain, spiral, Knots, Reaction wood, Stain, &c.**

Deficiency, nutrient 5248
boron 761
correction 760-3, 2292, 4016
Cu 5613
diagnosis 761, 3862
discoloration of foliage 5613
foliar analysis 763, 2433
effect on
frost hardiness 4015
relation to
soil properties 2433

Deficiency, nutrient — cont.
symptoms 2433, 5613
induced 4015
see also Chlorosis

Defoliation
artificial 2253, 2599
caused by fire 5791
effects of 5992
effect on
borer infestation 2612
crown and branching habits 2612
increment 2561, 2599, 4185, 4219
metabolism 319
nutrient reserves 5566
root growth 5566
mortality due to 4185, 5566, 5791
of seedlings 5566
see also **Insect pests of trees**

Demonstration forests 3219

Dendrochronology 1126, 2771, 4007, 4386, 5331, 6157-8
dating of
buildings 4383
forsenic applications 4383
review of literature 1124, 5331
use of C^{14} dating 6156
see also **Rings, growth**

Dendrometer(s) 2691, 2720
aluminium bands 603
conversion of instrument readings 4298
field calculator 4299
teledendrometer 1082

Density of wood 1207, 1279, 6307-8
cell wall 6332-3
criterion for thinning 2312
criterion of wood quality 6251, 6327
determination 1295, 1297-9, 2951-2, 2957, 6120, 6129, 6293, 6327, 6331, 6336, 6339
by beta-rays 2949-50, 6328
by X-ray 2949, 6328
comparative methods 1296
from increment cores 1295, 1298, 4555, 5175
hydrostatic methods 6329-30
effect of
extractives 2956
virus diseases 5906
genetically controlled 152, 5156
of
branchwood 6336
decayed wood 4737
juvenile wood 1572
mature wood 1572
top wood 1572
relation to
age 2958, 4604, 6337
anatomical characters 1229, 6337
anisotropy 4608
crown class 4604
density of wood substance 6334
growth rate 462, 1142, 4605, 6335, 6337-9, 6420
latitude 2954, 6335, 6420
light 4604
m.c. 2935
position in tree 1295, 1298, 2957, 3415, 4556, 6336-7, 6420
provenance 453, 1298, 2953, 2955, 3415, 5775, 6335, 6340, 6420
pulping properties 6681
late-wood % 2951, 6293
ring width 1142

Density of wood — cont.
spacing 6417
sampling 1295, 6335
strength properties 1314, 1542, 6305
veneer logs and bolts 6508
Derelict stands see **Defective stands**
Dermatitis see **Irritant properties of wood**
Deserts
see also **Arid zones**
Dew 1740; p. 379 (Netherlands)
Diameter
calipering
accuracy 1085
cost 1085
classes 2783, 4670
minimum size 1085
distribution 2079, 2783-4
see also **Stand structure**
measurement
of small trees 4297
with
dendrometers 2691, 2766, 4298-9
of
excentric trees 2764
relation of d.b.h. to
crown dimensions 4340-1, 6125
height 4340, 6125
stump diameter 1086
relation to
dry matter production 5156
fuel volume 1137-8
shrinkage 2763
variation
diurnal 132, 2763, 2766
seasonal 132
see also **Increment**
Dictionaries see **Glossaries**
Die-back 5754, 6070
associated with soil fungi 852
relation to
aspect 5852
insect pests 853
frost resistance 1076
host vigor 5853
microclimate 1076
mild winters 4290
shade 5852
soil nutrients 761
temperature 5852
thinning 4290
topography 4335
see also **Species Index**
Diffusion of liquids and vapours through wood see **Permeability of wood**
Dimensional stability, measures to increase see **Improved wood**
Directories 2360
manufacturers of forestry tools 2360
Direct sowing see **Sowing, direct**
Discoloration of wood
associated with
cement and mortar additives 6406
decay 2512, 5831
wounds 1562
see also **Seasoning, Stain**
Diseases, occupational
of woodworkers 1419
Diseases of trees 608, 2686, 5816
Diseases of trees — cont.
assessment of loss due to 5818
distribution 5815
list of pathogens 4082
resistance see **Breeding, tree**
surveys 4077
see also **Bacterial diseases, Decay in trees, Deficiency, Fungus diseases, Virus diseases and Species Index**
Disorders due to complex or unidentified causes 2686, 4290, 6067-71
Distillation, destructive 3154, 6734
of
bark 3156
sawdust 3157
recovery products 3156-7, 3160, 6737
food curing 3159
tar oil from 6736-7
see also **Charcoal**
Distribution and natural range 243-4 1949-50, 3484, 3500, 3511, 3514, 3517, 3529, 3584, 5245
altitudinal 242
climatic factors 331
edaphic factors 269, 3512, 3516
historical evidence 3183
latitudinal 3515
relation to
soil moisture 5238, 5396
transoceanic dispersal 5246
Ditch-digging equipment 5684
Documentation, forestry
biological 1706
Commonwealth Forestry Bureau 4936
decimal classification 14
electronic data retrieval 3218
F.A.O documents 3238
forest pathology 3218
macro-documentation 1707
micro-documentation 1707
microfilm 1708, 3237
Doors
dimensional stability 4683
flush 4683
Dormancy
bud 5122, 5259
relation to
frost hardiness 5257
growth regulators 124-5, 3385
photoperiod 1884, 3606-7, 5259
temperature requirements for breaking 124, 1884, 3606-7, 5259-60
see also **Phenology, Seed(s)**
Dormice
damage to trees 5914
Drainage 2419
combined with fertilizing 591, 3857
costs 6203
ditches
dimensions and spacing 2277
maintenance 1777
effect on
fume damaged stands 592
increment 591, 3857, 5611, 6203
nutrient content of needles 2278
root systems 3851
tree survival 5611
vegetation 341-2
wind firmness 4001
meteorological factors 588
peatland 588, 1777, 2277
Drainage — cont.
new methods 590
profitability 591, 6203
relation to maturity of stand 6203
ridge & furrow 2276
Drought
adaption to 3536, 5263
changes in osmotic pressure during 5263
changes of needle noisture during 5263
effect on
cone production 2037
flowering 2037
injury 255, 5762
mortality due to 5762
physiological 1837, 4006
relation to
disease 874, 5762
insect outbreaks 5762
Drought resistance 3536
breeding for 3441
effect of
fertilizing 3539
nutrients 3539
planting success 5581
relation to provenance 150
relation to seedling height 3441
relation to transpiration rate 150, 4006
seasonal variation 5581
testing 5581
see also **Soil, moisture**
see also **Afforestation, Arid zone**
Dry-matter production 325-7, 600-1, 1107, 2057-8, 2062, 2791, 3375, 3598-3600, 3602, 5107, 5250-1, 5275, 5327-8, 5329, 5364, 5396, 6803
aerial part of stand 4351
biological circulation 3601
bogs and fens 3601
breeding for 1142
determination of methods 2054-5, 2063-4, 4338, 5326
efficiency of 3603
relation to
forest type 2055, 3603
height growth 2128
leaf area 3373
light intensity 5102
plant nutrients 5064
respiration 5099
stand density 2059
temperature 5102
review of concepts 2053
seasonal variation 5330
terminology 2053
Drying see **Seasoning**
Durability of wood, natural 1369-72, 1513, 3086-7, 6592
classification 6589
relation to
heartwood extractives 1371, 1519, 4593, 6397
tree age 1371
testing 1468, 1519, 1528-30, 4738, 4741, 6587-91
variation within a tree 1370, 4739
weathering 1412, 3055
see also **Old wood**
Dwarfing 4022
Dyeing see **Colouring of wood**
Dye-stuffs 1652

Early and late wood
differentiation
physiological mechanism 4523
effect on
shrinkage and swelling 4550
effect of
fertilizing 5618
relation to
density 2951
strength of glued joints 4638
see also **Rings, growth**
Earthworms 41, 45, 47, 50-1, 56, 1773, 1775, 3304
see also **Enchytraeid worms**
Ecology, plant 228-37, 1936-46, 2083, 3500-10, 3237, 3239, 5233-4, 5355, 5383, 5395, 6800
adaptations 3391
alpine, symposium on 2074
ecosystems 204, 2094, 5277, 5329, 5354, 5356-64
dry matter production in 325
nutrient cycle 3549
terminology 351
theory 351
influence on silvicultural practice 364, 3608,
of mangrove swamps 375
sampling methods 3621
soil plant relations 3505, 5382
study methods 204, 357, 3536, 3620, 5277, 5329, 5346
surveys 2094
textbook 3576, 5233
see also **Rain forest, Synecology,** Vegetation, **and Species Index**
Ecology, animal 70-80
in tropical rain forest 3633
Economics, forestry 1166-93, 1196, 1680, 1696, 2816-39, 4426-47, 4855, 4860, 6172-3, 6191-212, 6230-41, 6781, 6847
agriculture vs. forestry 6801
analysis of possibilities 1178
bibliographies 6191
capital intensity 4431
cleanings and thinnings 4432
cost/benefit analysis 4427
cost price of standing timber 6200
costs 4445
criteria of profitability 1178, 1183, 1190, 2822
determination of type of product 1196
effect of size of enterprise 1169
estimated value vs. market value 1184
Faustmann formula 1179, 1181, 6197-8
financial planning 6211-2
forecast of profitability 4445
forest products industry 1680
handbook 4435
interest 6174, 6196-7
applicable to types of capital 6196
investment policy 2817, 4471, 6197-8, 6212, 4429, 4430
labour intensity 4431
land rent value 1181
of
amenity forests 1177, 2831
chipping 1205
cork growing 6206
farm forests 1174-6
Economics, forestry—cont.
forest industry 4435
high quality stemwood production 3648
insect control 6845
intensive forest management 1157
logging 1185, 5414
lumber industry 4453
multiple use 1177
national forests 6173, 6211
private forestry 1168, 1189, 4446, 6173
protection 3996
pruning 3886-7
recreation forests 4916, 4918
sawmilling 1188
sleeper production 1191
stand improvement 5414
thinning 6201
timber supply 1185
worker-owned plywood Companies 6239
plantations vs. natural forest 6144
prices 4445
pulpwood vs. pulpwood plus sawtimber 6199
regional development plans 4907
relation to choice of species 1183
relation to location of industries 4472
relation to location of markets 1185, 1196, 4472
relative forest rent theory 1179
road building 4429
social 4846
soil expectation value 1179, 1181, 6197
terminology 2835
textbook 1166, 4426
transport 2834, 6207
cable skidding 5728
value increase of exports 4457
Economic significance of forests 1679, 4846, 4853, 4906-8
Economics
see also **Costs, Prices etc.**
Edging machines 4655
Edible plants
see **Nut crops**
Education and training 1709-14, 3181, 3220-7, 3244, 4846, 4937-42, 4953, 6831-6; p. 569 (Gt. Britain)
demonstration forest 3219
employment of graduates 1714
fire control 785
for resources management 4937
forester schools 3220
handbook for schoolboys 1709
instructor courses 6833
inventory methods 4324
photo interpretation 2794-5
Effluents, industrial
effect on vegetation 3870
Effluents, sewage
effect on increment 3869
Entomology 68-9, 4944, 5943
annual review 3324
associates of bark beetles 3326
behaviour 3326
bibliography 68
climatic studies 5985
collecting methods 5363
culture of tissues 5964
ecological studies 5671
Entomology—cont.
emergence patterns 1026
field study methods 1014-5, 1019, 1025
traps 2601, 4189, 5939, 5940
frost resistance 6056
host selection 3324
identification
keys 1004, 1798, 1801, 3327
laboratory rearing 2589
larvae
behaviour 2351, 5982
identifications keys 1805
morphology 5050
mating, induced 1019
morphology 3329-30
neoplasms 3324
nervous system 3324
population studies 5363, 5968
protective devices 5982
pupae 6056
rearing cages 1057
regional studies 1774
sex attractants 1014-5, 1025
sex determination 69, 1278
sugar content of frost resistant insects 6056
taxonomy 925, 935, 937, 943, 956, 962, 997, 1050, 3326, 3329-30, 5050
text-book 4174
see also **Insect pests of trees**
Electrical properties of plants 3388, 5123
Electrical properties of wood 1271-2, 1411, 2966, 3064, 4541, 4705, 4708
Electron microscope see **Wood Anatomy**
Electronic computers see **Computers, electronic**
Elephants
damage 5919
Embryology, plant 86, 134-5, 313, 1828, 3390, 3592, 5111, 5137
End coating 6648-9
Endemism see **Distribution and natural range**
Energy transfer, plant/environment 17, 24, 3250
role of transpiration in 133
Engineering
forest
conference 3989
hydraulic 2419
timber 1442-3, 1447, 1449, 3047, 3053
Enrichment of
inferior growth 3893
tropical forest 5601
Entrophy 5250-1
Enumeration surveys 1079, 1097-102, 2722-7, 4323-30, 4392, 4883, 6099-112, 6769, 6843
assessment of oil-seed production 6769
assessment of timber qualities 1099
combined air and ground 1098
complete tallying vs. sampling 4328
continuous inventory 1096-7, 4387, 6143
experiment 6843
growing stock 1099, 6102
methods, organization, and equipment 4323, 4329, 5397, 6111
on steep slopes 2726
precision 6111

Enumeration surveys — cont.
sampling 2725, 6073-4, 6109
angle summation 2697
angular measurement vs. variable plot 1101
circular plot 4328, 6111
Cluster technique 4329
design 4327-8
errors 1101
intensity 6107
linear 1100
methods, study of 2724, 4327-8
'optical line' method 6111
permanent plots 4395
permanent vs. temporary plots 4394
plots, closely spaced 6108
point-centred quarters 1102
point-sampling 2697, 6110
point vs. line 2696, 4325
point vs. plot 2696, 2723
representative 1100, 4329
sample trees 2778
simulation 4326
size of unit 6110
statistical methods 6103, 6106
stratified 2724
strip 6073, 6107
sub-sampling 1100
'three-pee' 2719-20
variable radius plots 4330
sources of error 2725, 4387
use of
aerial photographs 6170
computers 2721, 2723, 2725, 4321
dendrometers 2720
see also **Angle count, Growing stock, Regeneration surveys, Surveys, forest**

Enzyme activity see **Fungi, Physiology**

Epicormics 529, 5321-2

Epiphytes
bark 6084

Erosion
aeolian 5044
bank 3896
control 637, 2323, 4860, 5041, 5044, 5055, 6818
engineering principles and techniques 5752
gully classification 3993
gully plugging 3993
in arid zones 1795
species for 580
effect of
clear felling 3321
grazing 66, 3321
litter removal 3321
logging methods 66
parent material 5042
riverside plantations 3993
vegetation cover 66
rainfall index 3318
relation to soil properties 250, 273, 2363, 5044
relation to vegetation types 5041
research 5042
relation to age structure of stands 66
see also **Afforestation, Forest influences, Shelterbelts, Shifting cultivation**

Evaporation 3313
relation to m.c. of forest floor 61
see also **Forest influences**

Evapotranspiration 3313
relation to available soil moisture 61
see also **Forest influences**

Evolution 2873
of phloem 2924

Excentricity see **Form, stem**

Exotics 436, 1921, 2138-41, 2143, 2147-8 3230, 3405, 3683, 3686-7, 3690, 3692, 3697-702, 4923, 5455, 5459
bioclimatic requirements 2146
conifers in the tropics 440-1, 1665, 5460, 6683
development 429
frost hardiness 444, 3588, 5116
management 437
natural regeneration 2130, 5431
naturalized 432, 1960
phenology 3419, 3691, 4391
relation to insect pests 905
relation to land use 4928

Exotics trials see **Species trials**
vs. indigenous species 5447, 5451
see also **Geographical Index**

Explosives
use in breaking ice to free logs 2411

Extraction see **Hauling, Skidding & c.**

Extractives see **Wood extractives**

FAO
bibliography and index of publications 1723

Farm woodlands 2819, 3809, 4899
economics 1170, 1173-6, 1676, 2820
enumeration surveys 4329
management 1173
relation to wood utilization 1206
survey of 1676

Fast growing species
plantations of 3681, 5447-8
susceptibility to sapstain 4719

Felling 676-82, 2367-70, 3931, 3936, 5692-4
axe vs. saw 3961, 3964
control of direction 674-5
costs 5717, 5721
damage to wood 5712
directly on to skidder 681
group
mechanized 6781
on slopes 3958, 3971
preparatory measures
lopping and topping 5691
prevention of splitting and splintering 2368
season
relation to insect and fungal attack 2673, 3935
theoretical studies 398, 677-9, 2369, 5712
uprooting 682
with
harvesters 2367, 5435, 5694, 5712
hydraulic wedge 5711
power saw 5711
shearing blades 701, 2396, 5693, 5712, 5715-7
tractor and winch 682, 2370
work studies 2388, 3942, 3958, 5414, 5721
see also **Logging, Saws, Work studies**

Felling sites, clearing of 5697
see also **Logging waste, Slash disposal, Stumps**

Fences and Fencing
see also **Posts**

Fertilization see **Pollination**

Fertilizer(s) 2208, 5520, 5684
bacterial 513
basic slag 2112
bonemeal 2246
Ca 5618
$CaCO_3$ 598
$CaNH_4NO_3$ 597, 3859
$Ca(NO_3)_2$ 597-8, 2285
complete 603
Enmag 3762
Fisons 49 (14%N, 2½%P, 16%K) 2282
hoof and horn 2246
humus (N, P_2O_5, Ca, K_2O) with peat and soil 3768
interaction 281, 604, 760, 3864
isobutylidene diurea (IBDU) 509-10, 3762
K 2204, 5519
K, form of 3760
KCl 603-4, 5519
N 2204, 3544, 3863-4, 5522
N, form of 512, 2286-7, 3763, 3765
NaCl 5622
NH_4NO_3 760, 3867, 5621
$(NH_4)_2SO_4$ 597-8, 2205, 2285
Nitroform 3762
NPK 508, 2204, 2283, 3540, 3858, 3909, 5616-8
P 2204, 3544, 3864
form in which applied 2207, 3767
Patentkali 2205
phosphates 604, 3862-3
see also superphosphate &c.
slow acting 510
slow and rapid release types 509-10, 3762
superphosphate 2205, 3246
syenitic granite 2206
trace elements 2297, 5269
trace elements (Mo) 760
trials 2204
types 2280
tyrosine 3868
urea 597, 603-4, 2292
wood ash 599
Zn 3544

Fertilizers, application, effects, etc., 445, 3855, 5613
aerial 594, 4451
after burning 3859
assessment of need 1758, 1815, 2201, 2208, 2286, 2288-9, 2291, 5620
assessment of results 2289, 2294, 3765, 3822, 5618
at planting 2294, 3822, 3864, 5568
before planting 5522
broadcast 3858
combined with
cover crops 606
cultivation 561-2, 2112, 2209, 2294, 3590, 3864, 5569
drainage 3857
irrigation 2206, 3540
thinning 2307
damage to transplants 3768
delayed response 5617
depth 2209
economics of 603, 2202, 3860, 5614, 5621
effect on
bud development 3769

Fertilizers, application, etc., — cont.
C/N ratio of soil 5616
cone production 478, 2287, 5495-6
crown development 5621
deer damage 2585
disease resistance 2503, 3866
drought resistance 3539
dry matter production 601
flowering 3402, 3590, 5495
frost injury 3763, 3868
fruiting 2297
fungus attack 4120
ground flora 600, 2293
growth 162, 598-9, 603, 2060, 2286, 2290, 3544, 3860, 3865, 3867, 5520, 5569, 5618, 5621
insect attack 2624, 4199
leader length 3858
litter decomposition 1751
litter fall 1751
mycorrhiza 2205, 5526
needle colour 511
needle sap concentration 4177
needle size, weight &c. 162, 602, 2287, 5621
needle water content 4177
nematode attack 4120
nitrogen fixation 3555
nutrient content
of ground vegetation 3858
of needles 3858
of soil 599, 3858
of trees 598, 602, 2287, 2290, 3861, 5618
nutrient uptake 162, 262, 602, 2212, 2286
pH 599
photosynthesis 2297
rodent damage 2581
root growth 293, 526, 3539
root systems 5296
seed production and quality 593, 2177
shoot growth 602, 3539, 5135
soil flora and fauna 597
soil moisture conservation 5622
snow damage 2286
under growth 2287
weed growth 600
wood anatomy 6416
wood properties 5618, 6674
feather-moss sites 2292
foliar 2297
form in which given 597
frequency 5613
in
forest or plantation 563, 593, 600, 603, 606, 2208, 2279, 2282, 2294, 3822, 3856, 3862-3, 3866-7, 3909, 5614-7, 5620, 6162
large scale 3852
mature stands 2286, 6162
medium aged stands 3861
nurseries 593, 1969, 2112, 2201-2, 2204-5, 2208-11, 2246, 3762-3, 5519, 5615
sand dune afforestation 3843
seed orchards 2177
the tropics 2246
methods 2207, 2280
nutrient uptake 2294
of
bamboos 604

Fertilizers, application, etc., — cont.
checked plantations 577
cuttings 2211
drained bogs 3857
fume damaged stands 2439
osiers 2295
peat 2282
peat bog 2281, 2291, 3856
peatland 293, 599, 2283-4, 3858
sandy soils 577, 603, 2288, 5620
seedlings 5520
soil improvers 281
pellets 3867
persistence of effects 602, 2282, 2287, 3864
planting holes 3858
pot cultures 3546
relation to
depth of water table 6155
pH 3765
root zone temperatures 3765
soil properties 511, 1971, 3546, 5520
research 593
review of 593
season 2283-4, 3763, 5094
soil vs. foliage 3767
spoil mounds 3838
surface dressing 3763
timing 5094, 5613
uptake and translocation 2285, 5094
see also **Composts Nutrients, plant**
Fibreboard 4811, 6469
addition of lignin 1615
conference on 1424
density 6723
drying 1617
economic aspects 1206
effect of
bark content 3148
chemical components of wood 1615, 4821
chemical pre-treatment 4821
pressing variables 1613
wood pH 3142
fire-proofing 1500-1
from
Eucalypts 1206
mixtures 3147
softwood sawmill waste 6232
tropical hardwoods 6690
hot-pressing 1612, 6726
m.c. 1612
preservation 6562
research on 1615
sawing 6429
species for 3142, 6690, 6722
strength 1614
testing 6367, 6706, 6724-5
textbook 6722
thermal properties 1612, 6313
water-repellent treatments 1614
see also **Particle board, Strength**
Fibres, vegetable 4832, 6671
Financing
forest enterprises 1192
Financing afforestation 2839, 4447
Finishes, wood 1410-3, 3029-33, 4661-6, 6485-94
bibliography 3029
effect of
wood extractives 6397
effect on
strength properties 1411
epoxy resin 6488
fillers 4663
lacquers 6489
overlays 6493-4, 6720
polyester 4713
pre-heating 4666
research 4666
resin films 4666
sanding 1410, 4661-2
stains 6492
testing 6493
text book 6485
ultraviolet-light absorbers 6489
varnish 1412-3, 4664
water-repellent 6492
weathering 1412-3
see also **Paints and painting**
Fire(s) 777-84, 2443-56, 4031-8, 5776-86
behaviour 780-1, 783-4, 2444, 2452-3, 2455-6, 4036-7, 5785-6
bibliography 777, 5776
causes 778-9, 787, 2444-5, 4036
grassland 5304
in wind-damage forest 2460
incidence in tropics 4033
insurance 2470
monograph 4031
prehistoric 2070
research 777, 783, 2443-4, 2452, 4035
socio-economic factors 782
statistics 778, 787
see also **Burning**
Fire control 778, 785-92, 2457-68, 4039-48, 5787-9
detection
infrared scanner 2458, 2464, 4041, 5788
towers 4032
economics of 786, 2458-9
in wind-damaged forest 2460
organization 788, 790
research 2444, 5779
training 785, 2444, 4042
see also **Burning, Firebreaks, Fire fighting, Helicopters**
Fire danger 5777-8
diurnal fluctuation 780
forecasting 4032
fuel(s) 2450, 2804
amount 2447, 5780-2
effect of
thinning 5782
measurement 5780
moisture content
measurement 2448
seasonal variation 5783
relation to stand density 2447
slash weight estimation 2446-7
indices 2449-50, 5784
litter removal 792
measurement 4037
research 4038
meteorological factors 780, 4032, 5779
relative humidity 2448
rating 2451, 4032, 5784
relative inflammability of species 4044
research 4038
see also **Slash disposal**

Fire detection 2458, 2462
air patrols 2458, 2463, 4041, 5788
Fire, effects, damage etc. 4032, 4034
assessment of damage 793, 2470
defoliation 5791
ecological effects 966, 2018, 2469, 4033
effect of
age 5304
effect on
disease 2525, 5851
increment 2018
land use 4034
litter fall 311
regeneration 2469, 3720
seed production 311
soil 795, 3319
succession 966, 2469, 3580
water yield 2099
wild life 4033
wood properties 4601
in young plantations 2471
Fire suppression
counter-firing 2453
organization 2465, 4039
protective clothing &c. 5789
training 785
use of
aircraft 789, 2465, 4039, 4041, 4045-6; p. 201 (Canada)
bombs, fire extinguishing 4032
bulldozers 5789
dusting equipment 2468
foams, retardants etc. 791, 2466-8, 4032, 4045, 4047-8, 5789
motor cycles or scooters 2842
tankers, ground 5789
Fire resistance of wood see **Thermal properties of wood**
Firebreaks 4032
cleared 5787
layout 778
live 4044
mechanical cultivation 778, 5787
use of weedkillers 2451, 4048, 5787
Fireproofing 1497-1501, 3073-7, 4715-7, 6403, 6578-80
bibliography 3073
chemicals 1500, 3075-7, 4715-7, 6578-9
effect on
physical and mechanical properties of wood 3074
pyrolysis products 3075
fibreboard 1500-1; p. 569 (Great Britain)
fire retardant coatings 1499
flame retardants p. 569 (Great Britain); p. 570 (U.S.A.)
improved wood 1498
particle board 3076-7, 6580
persistence of effect 4716
plywood 2934
testing 2933, 4539, 4715-6
veneer 6578
Flame retardants see **Fireproofing**
Flammability of wood see **Combustion of wood**
Fish
effect of
logging 1814, 5062
Flexible wood see **Plasticized wood**
Floating and rafting 732-5, 2411-2, 3988, 5745-9, 6122; pp. 782-3 (Sweden)
Floating and rafting—cont.
automation 6122
booms 5749
bundles and bundling 2412, 3988, 5746
chips 733
dams 753, 5753
driftwood
utilization of p. 569 (Canada)
economics of 732-3, 3988
equipment 677, 5746
hydraulic studies 753
ice
breaking 2411
in ditches from tropical swamps 2419
log jams
regulation of 5749
loose driving 733-4, 3988
organization 733-4
sorting 735
work studies 2385
Flood control 66, 3896, 6810
see also **Forest influences**
Flooding
damage
bank erosion 6810
uprooting trees 6810
effect on
seed germination 3676
seedlings 758, 4012
woody species 758
resistant species 3896
see also **Sea water**
Floodplain forest 3896
Floors 1452-5, 3052
blocks 1452
boards 1452
finishes 4664
mosaic 1452
parquet 3114
plywood 1453
semi-sprung p. 782 (Great Britain)
standards 1452
strip 1452
timbers for 1454-5, 3052
Floral morphology 207, 210, 5139, 5141
Floras see **Geographical Index**
Flowering 1851, 5118, 5310
abnormal 1867
age of onset 5492
cuttings vs. seedlings 5564
biology of 2029
effect of
climatic factors 2028, 2030, 2037, 5495
fertilizing 3402, 5495
gibberellins 2176, 5497-8
root pruning 3402
induction 2178-80, 5498-5500
on branches 5499
of
conifers 310, 5138, 5498
on grafts 2178, 2180, 2236, 5500
physiology of 3390, 5307
relation to
photoperiod 5138, 5498
sex ratio 5309
see also **Phenology**
Flowers 3399
formation of buds 222
hermaphroditism 1864
sex 3421, 5499
vascular system 207
Flushing see **Phenology**
Fodder
leaf 1807, 3161
trees and shrubs 1807, 2333, 5648
see also **Browse plants, Grazing and pasture, Yeasts**
Fog and mist drip 3311, 5035; pp. 8-20
Fogging machines see **Sprayers**
Foliage
absorption of mineral nutrients 100
analysis to determine
efficiency of fungicides 4082
nutrient status 162, 260, 271, 595, 1821-2, 2286, 2291, 2375-6, 2433, 2503, 3292, 3343, 5063, 5265-6, 5269, 5619
analysis, errors 1816
analytical methods 81, 3343-4, 3356
diseases 876, 4154-6, 4158, 6058
efficiency 2056
m.c.
relation to disease resistance 5170
relation to frost hardiness 5170
seasonal variation 5783
necrosis induced by soil salinity 4013
oils 6761
production
seasonal 319
quantity and weight 2056, 2375-6, 4344, 4346-7, 5069, 5375, 6761
tree dimension indices 4344, 4346
reflectivity 4986, 5360
relation to
light intensities 5353
site quality 2056
sampling 1816, 4345
surface area 6127
thermal relations 4044
utilization 1635, 2375-6
water relations 150
yield 4344
see also **Crown, Deficiency, Leaf, Needle(s)**
Forest administration 1169, 1704, 2816, 6182, 6210, 6213-4, 6825, 6848
handbook of instruction to officers 4448
in private woodlands 6215
Forest as source of employment 1698
Forest development
studies 4951
Forest history 335, 1655-57, 3177-85, 3188, 3609, 4846, 4848-52, 4957, 5340, 6244, 6774-5, 6786, 6816
Scottish history 1654
Forest industries
establishment 4471, 4473
integration 2854, 4468
plymills & sawmills 4472
pulp and paper 4472
returns in taxation 4472
returns to grower 4472
Forest influences on
air pollution 1695, 4023, 5765, 6803
air temperature 4988, 5357-8
avalanches 6803
climate 6803
erosion 66, 1780, 3321, 4011, 5041
evaporation and transpiration 61-2, 1782

Forest influences on—cont.
flood control 1790, 4011
infiltration and run-off 61, 66, 1780, 1784, 3321, 3550
ionization of air 3212
microclimate 3899
mist 5035
public health 3212
relative humidity 3257
rime 5035
snow regime 1785, 4011, 5033
sociological 4846
soil moisture regime 5038-9
soil properties 3264, 3270
soil structure 5042
soil temperature 4988, 5357-8
stream-flow 59, 64-5, 1779, 1790, 3314-5, 3317, 5037
water regime, general 6803
water temperature 3322-3
water quality 576, 3317, 3320, 3322
water yield 59, 64, 3317
see also **Shelterbelts**
Forest law 1656, 1700-2, 3215, 4854-5, 4930, 4934, 6825-6
Forest management see **Management, forest**
Forest margins
reduced increment on 3526
Forest ownership 1655, 1676, 6822
demarcation and registration 4930-1
forest industry companies 6823
protection of 4930
Forest policy 1658-62, 1666, 1689, 2839, 3176, 3185-6, 4034, 4464, 4848-50, 4853-6, 4882-3, 6194, 6212, 6222, 6776; p. 201 (France)
FAO report 6778
see also **Geographical Index**
Forest products and their utilization 1414, 2857, 4458, 6174, 6222, 6776
added value to round wood equivalent 4457, 4472
bibliography 4478
economics of 1158, 4457, 4907
forecasting trends 4467, 4907
research 1207, 2858, 4479-80, 6247-8
research serial 3241-2
standards 1208
survey 4480
Forest rights 1655, 6827
Forest types see **Vegetation types and Geographical Index**
Foresters
historical 6773
Forestry 6
aims 3176
associations 3216
bibliographies 4-5, 13, 4962-5
classification 3244
documentation 3216
general textbooks and handbooks 3455, 4950
graduate theses 1720
periodicals and serials 7-11, 1723, 1725, 1727-32, 3243, 4966-70; p. 201 (international), p. 201 (France)
multi-lingual 1729
research 2-3, 12, 4852
statistics 4890
Forestry Development
technical aid sources 4955
Forestry Development—cont.
United Kingdom aid to overseas countries 4954
Fork-lift see **Lift trucks**
Form, stem 6085
burls 5323
crookedness 5467
defects 5467
early testing 3423
effect of
snow bending 4010
topography 4335
wind 6414
excentricity 324, 2694, 2764
factors 2704, 4304-5, 4308
increment 4388
height 6073, 6086
lean 324
quotient(s) 4304-5
relation to
radial increment 6154
silvicultural system 3659
wood structure 6414
see also **Taper**
Fossil tree spp. 2991, 6384, 6413
Fossil wood 2991, 6413
Frost
cause of physiological drought 1837
effect on
disease susceptibility 5865
hazard, assessment of 3252
night 2425
Frost heaving
effect of soil preparation 2430
Frost injury 756, 2425-30, 4005-8, 5759-62
by
desication 1837
early frosts 5865
late frosts 2426, 4987, 5759-60
night frosts 2426
cracks 2429
effect of
aspect 2429
shelter 5760
side 5760
overhead 5760
soil freezing 4006
sowing density 3774
effect on
pollen 3588, 5116-7
frostcracks 4009
in forest clearings 4987
preventive measures 2425
choice of resistant species 2426
silviculture 756, 2426
relation to
date of flushing 4005
provenance 449
topography 3683
stresses 100
survival 100
susceptible species 3523, 3588, 3853, 5760-1
to
bark 756
buds 3588
cambium 4010
foliage 5254
seedlings 2428, 3523
shoots 5256, 5760
xylem 4010
see also **Winter injury**
Frost resistance
biochemical/physiological factors 100, 114, 246-7, 556, 1958-9, 3417, 5170, 5253, 5255, 5258
breeding for 3426
effect of
fertilizing 3868
photo-period 1956, 3524, 5257
low temperature treatment 3525
temperature 2428
effect on
distribution 3523
methods of increasing 3524-5
relation to
aeration 5256
electrical impedancy 5123
phenological phases 1957, 3417, 5760
provenance 162, 453, 1883, 3417, 5254, 5258, 5759-60
seedlings 3523
testing 3388, 3522
variation
intraspecific 1958
Fruit
changes in m.c. 315
chemical constituents 649, 6768
development 315
edible 3506, 6769
morphology 206, 5144, 5224
use as fodder 4344
variation 3444
Fruiting
effect of climatic factors 5309
see also **Phenology**
Fuel plantations 4756, 5445
costs 3679
see also **Irrigated Plantations**
Fuelwood
air-drying 4756
calorific values 4688, 4756
chips 1415
economics 1415
management for 1138
storage 1415
transporting 1415
yield 1137-8
relation to d.b.h. 1137
see also **Waste wood**
Fumes, industrial see **Atmospheric pollution**
Fungi 2500, 4131, 4721, 5812, 5819
alternate hosts 2542, 2565, 5902
antagonism between 847, 4088
associated with
bark diseases 5863
damping off 2505
galls 4130
heartwood discoloration 4720
insects 1028, 4261, 4275, 6044
attractive to insect parasites 6044
bark-inhabiting species 837
biology 4111, 5900-1
cellulolytic 1506, 3166
chemical activity 3166
culture
collection(s) 2475, 6584
cultural characters 5898
culturing 2514, 4094, 5028, 5835, 5842, 5849, 5874, 5892, 6594
cytology 4109
differentiation of strains 5842-3, 5845
distribution 845
distribution maps 845, 2524, 2531

Fungi—cont.
ecology 842, 2496, 4095, 5375
edible 662, 3170
effect of
aeration 5849
growth substances 1989
humidity 875
O and CO_2 pressure 4729
soil solution 1772
effect on
lignin 5855
enzyme activity 98, 3166, 4732, 5855
fructification, occurrence of 1520, 5849
growth conditions 4117
host
parasite relations 4086, 4106, 5843, 5868, 5881
host specificity 4147, 4150, 5888
in Beech Forests 362
in graveyard soil 4723
in living trees 2511
in pulp and paper mills 1514
inhibiting factors in soil 5836
inhibition of root growth by 5845
inhibitors and stimulators in plants 4147
insect vectors 1027
interactions between 2509, 5823, 5833-7, 5844-5
interaction with nematodes 4120
intraspecific variations 4111
isolation and identification 828, 2567, 2576, 5028, 5824-5, 5846, 5880
life cycle 875
light requirements 1520, 5852
longevity 2532
marine 1508, 3082
medical uses 3166
metabolism 848, 4731
microscropy
interference contrast 6581
moisture requirements 5833-4, 5838
morphology 875, 2568, 5868, 5874, 5898
nutritional requirements 1514, 4129
overwintering 5883
parasitic
on mistletoe 5807
on other fungi 2538, 4152, 5883
on peat moss 5018
pathogenicity 828, 874, 4113, 5898
pathogenicity, mechanism of 5855
perfect forms 5894
pH requirements 4116, 4129
physiology 2517, 3166
production of antibiotics 3166
rhizomorphs 2514
rusts 4149
spore
dispersal 18, 843, 874, 4141, 4146, 4980, 5869
germination 4086, 4136, 5874-5, 5880, 5892
production 4129
respiration 5875
sporulation 5858
spread 5845
study methods 846, 3299
systematic and taxonomic studies 839, 841, 2542, 2556, 2568, 3449-54, 4081, 4112, 4140, 4149-50, 5197, 5199, 5200, 5822, 5864, 5886, 5894
temperature relations 853, 875, 1520, 4116, 5852, 6594
text book 3448, 5196
tolerance of organic fungicides 2475
toxin production 848, 2517, 6045
ultrastructure 2475
variation 1520
see also **Decay, Fungus diseases, Mycorrhiza, Rot fungi, Soil, Stain fungi, and Geographical Index**

Fungicides 5821, 5828, 5891, 5893
Actidione 834, 857, 865, 870, 5878, 5885
amabane 5828
application
bole sprays 857, 865, 870
injection 857, 5860, 5878
BHC 4100
Bordeaux mixture 876
Captan 859, 3751-2, 5827
combined with hormones 3782
creosotes 5028
CS_2 841
Cu compounds 2555, 2560, 3750, 4082
cycloheximide see Actidione
cycloheximide derivatives 857
dimethyl sulphoxide 859
2, 4-dinitrophenyl thiocyanate 5828
Dithane 2570
Dowicide 5885
Dyrene 4143
effect of
physical aspects of soil 2475
effect on
pollen 155
seed germination 3751
seedling survival 3820
ethyl mercury phosphate 834
ferbam 5828
Freer's Dutch Elm Arrester 859
Heryl 2563
$HgCl_2$ 2182
lime-sulphur 876
MeBr 841, 2181, 3066
Na arsenite 864
$NaNO_3$ 847
Novazir N 2563
Novazir N—50 2563
oligomycin 5860
ortacide 3750
phytoactin 865, 870, 3820, 4148, 5885
phytotoxicity 5878, 5884
Polybarit 2563
propylene oxide 1504
season for application 5900-1, 5857
soil treatment 857
sprayed from air 2560, 2570
TCPA 5857
testing 4082, 5884
thiram 2181, 2560, 3750, 5827
thiram dust 3749
TMTD see **thiram**
tolerance of 2475
Tripomol see **thiram**
Trizone 507, 3752
Zineb 5827-8
see also **Preservatives, Sprayers**

Fungus diseases 823-80, 2495-576, 4074-159, 5812-903
artificial inoculation 2530, 4122
bark 5863
biochemical/physiological effects 850, 2495, 4103, 4144, 5848, 5877
control 2528, 2563, 2570, 4078, 4148, 5869, 5893, 5900, 5901
aerial 2555, 2560
antibiotics 857, 865
appraisal 859
biological 841, 847, 6599
burning 4091
chemical see **Fungicides**
chemotherapeutic 5860
dusting 2560
eradication of alternate hosts 2539-40
mechanical 5878
quarantine regulations 823
regulations p. 202 (New Zealand)
resistant stocks 841
silvicultural 851, 2522-3, 2532, 3779, 4101, 4108, 4115; p. 202 (New Zealand)
soil treatment 841, 5821
stump treatment 847, 2521
detection 846, 2528
distribution 823, 2528, 4114, 4121, 5889
distribution maps 5887
economic effects 823, 4076
effect of
aspect 5852
chemical content of sap 858
cleaning 5864
drought 874
fertilizers 4120
fire 2525, 4117, 5851
heat 5896
frost 5864-5
season 4152
shade 2557, 5852
spacing 5895
thinning 5864, 5870
tree size 5840
effect on
increment 4102
root cuttings 531
roots 840
stem form 4335
yield 2498-9
epidemiology 4128
infection 844
artificial 2562, 4126-7, 4144, 4153, 5847, 5850, 5853, 5876
by insects 1046, 5854, 5861
factors affecting 5821
from
old stumps 4101
mechanism of 4157
meteorological factors 877
of cut disks 843
of planting stock 2257
of stumps 843
phenological factors 4153
rates 5847
relation to
age 5839
fertilizing 2503
through
bud-scale and leaf scars 5853
dead branches 5831
dead insects 5938
hail wounds 5829
insect injuries 853
leaf surface 4127
needles 5938
pruning wounds 2321
roots 5845, 5847

Fungus diseases—cont.
wounds 851, 5829, 5845, 5831, 5850, 5864
internationally dangerous 2554-5, 2558-60, 2560
mechanism of 6045
necrosis 5865, 5869
of buds 3453
of forest products
bibliography 4718
of needles 5198, 5890
of seeds and seedlings 824, 826, 2504, 3749, 3752
on burnt-over sites 5851
relation to
age of leaf 2573
aspect 2513
grazing 863
growth substances 5859
growth rate 4105
insect pests 2618
mycorrhiza 2501
nematodes 4120
provenance 832
site quality 2573
temperature 2543
vegetative propagation 532
research 2534, 4094
resistance 98, 858, 877, 2519, 2571, 4074, 4106-7, 4114, 4118, 4122, 4125, 4151, 5859, 5893
spore translocation in host 2530
spread 844, 852, 2569
testing for resistance 2562, 4126, 4144, 4153
see also **Breeding, Canker, Damping-off, Decay, Die-back, Dutch Elm disease, Fungi, Nursery practice, Root and butt rots, &c., and Species Index**
Furfural from wood 6728
see also **Hydrolysis**
Furnaces see **Stoves**
Furniture manufacture
automation 6533
bentwood 6483-8
components 3040
costs 6533
particle board components 6721
research 1458
seasoning for 6634
testing strength 1458
timbers for 1213, 1218, 1222

Galls 865, 927, 1065, 5755
cytochemical studies 4285, 5877
development 866, 4130, 5876-7, 6053
dimorphism 4286
induced by insects 4286, 6055, 6057-8
Game see **Birds, Wildlife**
Gas(es)
circulation in plants 5092
injury 5766
Gamma rays see **Radiation, ionizing**
Genetics 145-92, 1866-905, 3401-44, 3478, 5145-89, 5469
allelomorphs 180
barriers 168
bibliography 3401
combining ability 154
conference on 1866-7
formation of ecotypes 182
genetical surveys 5147
heterosis 151, 2174

Genetics—cont.
incompatability 1868
inheritance of
bark characters 3433
branching habit 152, 5161, 5178
cellulose content 2979
compression wood 1894
cone and seed properties 3408
cone production 171
diameter growth 5177
disease resistance 165, 172, 4125
drought resistance 3441
germinative capacity and energy 1878
growth vigour 152, 172, 1899, 2173
height growth 154, 5177-8
leaf colour 5155
phenological characters 1897
physiological properties 201, 5162
resistance to transplanting shock 1897
root form 5295
rooting capacity 2228
rust resistance 4139
seed characters 1895
seed weight 1890
spiral grain 2920, 4525
stem form 1894, 2173, 3423
tracheid size 183
wood density 2953
wood properties 152, 187, 1894, 5156, 5180, 6681
interspecific incompatibility 168, 1892
mitosis 1908
mutations 1876, 3435, 5155, 5183
mutations, induced 5147
polyploidy 1902
research 145, 5147-8
segregation 148
self-incompatability 1868, 5119, 5159
selfing 148, 1878
trends 5147
variation 145, 1888, 1893, 3419, 3429, 5169, 5178
altitudinal 154
analysis 154, 5148
clinal 3411
ecotypic 265-6
estimation 3407
geographical 1891, 2159, 3374, 5473
see also **Races, and Species Index**
morphological 5158, 5173
physiological 152, 184, 186, 1878, 3416, 5158
see also **Breeding, Cytology, Hybridization, Hybrids**
Geological formations
influence on
vegetation 3643
Germination see **Seed**
Gibberellin see **Growth-regulating substances**
Girdling 621
depth 620
effect on
insect attack 1046
partial 1046
review of literature 5634
survival periods 5634
type 5634

Girdling—cont.
with chain saw 620
see also **Poisoning**
Girth
measurement
errors 1083
see also **Diameter**
Glasshouse see **Greenhouse**
Glossaries, Dictionaries etc:
country life in France 1
French
forest 3235
multi-lingual, forestry 1719, 4960-1
drainage 1721
hydrology 58, 1721
irrigation 1721
silvicultural 1720
see also **Terminology**
Glue joints, strength & durability 1396, 3019-22, 4634-40, 6440-7, 6522
corner tenon joints 6446
effect of
age of glue 4637-8
chemical reaction with wood 6452-3
glue type 4640
seasoning methods 6462
surface properties 1397, 4641-2
swelling 6514
transverse bonding 4639
viscosity of glue 4637
wood anatomy 4638, 4640
wood density 1397
failure, location of 4636
finger joints 1396, 3020-1, 6440-2, 6444-6
die forming 3019, 4634, 6440
impression 3019, 4634
impression vs. conventional 4635
manufacturing code 6443
scarf joints 6444
stress/strain 6358
testing 3020-1, 6446, 6484, 6493-4, 6514
bending 1429
fatigue 1480
sonic 3022
Glues
addition of insecticides 6561
adhesion 4644, 6456
prediction 4644
adhesion tests 1399, 6449, 6450
bleeding 4649
casein 1433, 1480, 6466
cashew shell oil 3024 4822
durability 6431
extenders 1399
fillers 6456, 6460
identification 3023
rubber-base 4677
Sinteks AT-90 6712
powdered 6461
solvent resistence 1399
synthetic resins
melamine 6452-3
phenolic 1399, 1433, 4645, 4649, 4677, 6452-3, 6455-60, 6560, 6563
PVA 1433, 4647, 4677, 6466
resorcinol 3020, 4647, 6466
urea 4646, 4677, 6452-3, 6461, 6466, 6561, 6717-8
tannin—formaldehyde 4648
testing 4646
accelerated 2647, 6711

Glues—cont.
laboratory 6450
text book 6448
Glues and gluing 1207, 1397-1401, 3023-4, 4641-50, 6448-66
Gluing
curing conditions 6457-9, 6461, 6465, 6717
curing time 4645
dielectric heating 4941
dry bonding 6461
effect of preservatives 6560
improved wood 6466
laminated wood 6451, 6465
particle board 4641, 6717
plywood 4641, 6456-59, 6461-2, 6464, 6560-1
pre-heating 6465
resin impregnated wood 1401
spreading of glue 6464
tropical hard woods 6454-5
ultrasonic 1400
see also **Glue joints, Plywood**
Glulam see **Laminated wood**
Grading 1302-3, 1566-7, 2960, 3039, 3048, 3113, 3128, 4557-60, 4669, 4671, 4681, 4786-7, 6221, 6229, 6343-7, 6355, 6359, 6521, 6670-
butt logs
relation to tree quality 1566
logs 3128, 4786, 6221, 6655, 6670-1, 6673
evaluation of grades 6672
for veneer 1567
relation to site quality 6654
sawn timber 3039, 3041, 4672, 6221, 6343-46
mechanical vs. visual 4558, 6349
vibration grader 6349
standards 6670
standing timber 4331, 6672
uniform rules for E.E.C. 6670
use of computer p. 201 (Great Britain)
see also **Stress grading, Wood quality**
Grafting see **Propagation, vegetative**
Grafts
anatomy 2978
flowering and seed production 2178-9
Grain
curly 881
interlocked 2923
spiral 1253, 1560-1, 2918, 2920, 2922
assessment 6658
causes 2919
detection in standing trees 2917
detection in telephone poles 2917
economics loss from 6657
factors influencing development 2915
measurement 2921, 4525
patterns 6656
relation to
rate of growth 1561
water conduction 2915-6
research 2913, 2921, 2923
variation with distance from pith 4525
variation with position in tree 4525
Grass
communities under woodland 3614
Gravimorphism 5107
Grazing and pasture 646-7, 863, 884, 2064, 2331-3, 3900-2, 3445, 3508, 3676, 4344, 5242
cattle 646
effect on
regeneration 884, 3676, 3901
forage species 2331
in forest 2332
in plantations 3832
management
in forest 646
ornamental 3908
relation of forest grazing to canopy density 646
relation to
rust disease 863
sheep 2331
tree enchroachment 5242
see also **Fodder, Poisonous species, Weed trees and shrubs**
Greenhouses
CO_2 enrichment of soil 389
multi-tier 2244
plastic 389, 2243
Ground flora 353-5, 279, 293, 301, 303-5, 353-5, 362, 600, 776, 2076, 1762-3, 1766, 2011, 2076, 2096, 2293, 2804, 3614-7, 3341, 3369, 3598, 5100, 5344, 5302, 5385, 5392, 5396, 5781
chemical constituents
effect on germination 2013, 2016
distribution and ecology 355
dry-matter production 600, 5781
effect of
clear felling 279
crown cover 3341
fertilizing 600
liming 2293
litter 303
protection 355
shade 303
inhibited by Eucalypts 305
in mixtures 3616
nutrient accumulation 279
relation to site preparation 1766
respiration of 5100
root systems 293, 3615
succession 355, 3616
use in forest classification 3626
variation 354
see also **Burning, Competition, Indicator species, Vegetation types**
Groundwater
level
effect of
forest clearance 5009
effect on
increment 1962, 3534-5
root growth 1961, 5262
fluctuations 258
mineral content 35
see also **Forest influences, Soil moisture**
Group dying 2525
Group regeneration see **Regeneration, natural, silvicultural systems**
Growing stock
regulation 1140, 6175
relation to current increment 2773
variation of levels 6148
Growth 5457
analytical methods 2782
climatic factors 3519
Growth—cont.
concepts 1852
cycles 116
effect of
fruiting 2050
environmental control 1955
of plantations, exotic 5456
patterns 1117-8, 2772, 2782, 3366, 3381, 4386, 5108, 5130
physiology of 100, 1852, 5107
seasonal rhythm 3381, 3597
stages of
response to water 251
stagnation 3660
stresses 1536, 4603
see also **Habit of growth, Increment, Mathematical methods, models, Phenology, Rings, growth**
Growth factors, effect on wood properties and structure 1247, 3415, 4604-5
Growth functions 2752
Growth-regulating substances 121-6, 1853-6, 2420-1, 3383-6, 5094, 5107-8, 5110-5
application to planting stock 546-7, 3780
combined with fungicides 3782
Cycocel 3780
effect on
apical dominance 1853
buds 126, 5497
cambial activity 123
dormancy 124-5, 3385
early/late wood differentiation 4523
excised embryos 5111
flower formation 2176, 4578
frost resistance 3524
germination 3746-7, 5511
phloem development 6302
photosynthesis 2275
pollen 126
radiation damage 5770
reaction wood formation 2906
roots 121, 3384, 5540, 5546
seedling 546-7, 2247, 3386
shoots 120, 2274-5
suckering 308
xylem development 4504
form cambial extracts 122
gibberellins 2176, 2274, 3386, 3747, 4578, 5110-11, 5478, 5770
in cuttings 3384, 5113-4,
in leaves 3383, 5859
in plant extracts 2016
in pollen 5115
in roots 2017, 3383
in xylem sap 5112
interaction 3746
kinetin-like compounds 100
mechanism of action 4504, 5857
relation to
disease 868, 5859
mycorrhiza 1989
stress patterns 320
seasonal changes 1885
translocation 5094
use in
vegetative propagation 540, 2229, 5540
use to control fruiting 5499
use to retard height growth 3780
see also **Weedkillers**
Growth rings see **Rings, growth**

Gummosis 3866, 4294-5
Gums 3919, 4845
chemical composition 1651
study of 1651

HABIT of growth 1853, 5153
environmental effects 5320
prostrate 3594, 5320
slenderness ratio 3596
see also **Branches, Crown, Form, stem**
Hail damage 757, 5763, 5829
Hardboard see **Fibreboard**
Hardiness see **Frost hardiness**
Hardness of wood & wood products 2968, 6367-8
Hare(s) 4017
damage 4166
Hauling 3931
costs 704
lorry 3987, 5718
winch 704
work study 3987
see also **Cableways, Railways, Skidding, Tractors, Transport**
Health and hygiene 663, 665, 1362, 1364, 2990, 5679, 5681
cancer in wood workers 1363
dermatitis 193
effect of
excessive effort 2356
herbicides 4056
noise and vibration 1419, 2356-7, 2393, 5684
wood dust 1363, 1419
hay-fever 4980
medical inspection of workers 5677
meningo-encephalitis ticks-borne 5678
noise abatement of steam bores 4684
of forest workers 5676, 5678
work on tractors 5680
Heartwood
abnormal 1373, 3125, 6299
properties and uses 3124, 4782-3
relation to pH 1563
artificially induced 4524
chemistry 1333, 1335, 1340-1, 1348-53, 1356-8, 2987-9, 4584-8, 4590-2, 4594-7, 6298, 6300, 6385-91, 6393, 6395-6
coloured 4524, 4740, 6300
cytology 1252
decay resistance 4740
definition inadequacy 2512
distribution in stem 2512
durability 4738
formation 2512, 2910-2, 4524, 5611, 6296-8, 6300, 6674
pathological 2512
physical and mechanical properties 4782
proportion 2908-9
red heart 3124
relation to pH 6409
'wet' 4097
wound heartwood 2512
cf. **Sapwood**
Heat, effect on living plants 5896
Heat, effect on seeds 4028
Heat, effect on wood 1269
Heather
biological control 4239
see also **Calluna vulgaris in Species Index**
Heathlands
see **Afforestation**
Hedges
ecological aspects 3335
relation to wildlife 3335
see also **Shelterbelts**
Height
curves 4353, 6080-1,
differentiation capacity 5427
form height 6073
mean stand height 1088, 4353
relation to other stand heights 4302, 6073
measurement errors 4301, 6126
measurement on air photos 4407
measuring instruments 1087, 4301 6073, 6078-9
relation to
d. b. h. 2761, 4340
relation to root volume 5299
volume increment 5630
top height 1088, 4302
see also **Increment, Site quality**
Helicopters
for
enumeration surveys 4452
fire control 2463
fire fighting 2463
herbicidal treatment 834, 2570
insecticidal treatment 961, 973
regeneration surveys 2806
Hemicelluloses 1327-9, 1368, 2980
Herbicides see **Weedkillers**
Heredity see **Genetics**
Hermaphroditism 1864
High frequency see **Dielectric**
Histology 86-7, 1906-10, 2924, 3447, 5191-5, 5856, 6288, 6290
see also **Wood anatomy**
Hoar-frost see **Rime**
Hoe, rotary
Hogs see **Chippers**
Hole-diggers 564, 2325, 5573
powered 3824, 5568, 5572
vs. hoe 5568
Honey see **Apiculture**
Honey fungus see **Root and butt rots**
Honeydew see **Insect pests of trees**
Hormones see **Growth regulating substances**
Horses see **Skidding**
Hot water treatment of wood see **Hydrothermal treatment of wood**
Houses, wooden 1440
prefabricated 736, 1440
see also **Buildings**
Humic acids see **Soils**
Humidity, relative 27
in forest cf. open field 3257
silvicultural significance 5247
see also **Forest influences**
Humus 3281
biochemical characters 5020
calorific value 3282
chemistry 4996, 5375
classification 1753
effect on
chemical properties of soil 1973, 3298, 3627
regeneration 794, 2041
Humus — cont.
fauna 3281
formation 50, 56, 3284
effect of soil type 3284
fungal nutrition in 6606
humic acid 6606
N mineralization 596, 2214, 3537, 3854
radiocarbon dating 3272
raw 596, 2214, 3537, 3854
decomposition 50
effect of clear felling 3537
formation 50
types 5283
water-holding capacity 2041
Hybridization 3478
artificial 156, 3636
barriers to 156, 168
geographic variation in crossability 168
heterosis 1896
in seed orchard 3438
intergeneric 5151, 5176
interspecific 3402, 5151
intraspecific 5151
introgression 149, 1901, 5172, 5174
natural 3468
species incompatibility 1892, 3439
techniques 167, 176, 3436, 3439
Hybrids
back-crosses 1243
chromosome behaviour 5184, 5186-7
diagnostic characters 1914
evaluation 1243, 1879
growth dynamics 185
heterosis 1896
interspecific 167-8, 170
natural 151, 169, 177-8, 1877, 1905, 3485,
needle morphology 3468
rate of growth 151
seed production 163, 167
seed weights 1890
trials 185, 460-3, 1879, 3409, 5477-9
see also **Genetics, Species Index**
Hydrology 58-67, 1777-95, 2489, 3309-23, 5033-45, 5375
dictionary 58
research 1785-6, 5037, 5040
research data for forest policy 3309
water supply and use 3317
see also **Catchment areas, Forest influences, Infiltration, Snow, Soil moisture, Streamflow, Water relations &c.**
Hydrolysis of wood 1619, 3149-51, 4283-5, 6727-8
of sawdust 3150
formation of products 3149
Hydrothermal treatment of wood
with water 1536
see also **Heating of wood, Steaming of wood**
Hypsometers see **Height, measuring instruments**

ICE, damage 2431, 4009
Identification see **Keys, Seedlings, Wood identification**
Ignition of wood see **Thermal properties of wood**

Improved wood 1491-6, 3068-72, 4708-14, 6564-77
compressed laminated
durability 4685
fire resistance 1498
properties 4711
strength 6570
uses 4685
compressed, solid
abrasion resistance 1492
cog wheels 1496
dimensional stability 4708
electrical properties 4708
hardness 1492
resin-treated 6569-70
abrasion resistance 1492
cresol-formaldehyde 4685
furfural/phenol 4709
hardness 1492
phenol-formaldehyde 1492, 4685
properties 4710-1
urea-formaldehyde 4710
uses 4685, 4710
treated to modify cellulose
acetylation 6568
dimensional stability 1493
formaldehyde 1493
resistance to fungi 6568
treated with bulking agents
abrasion resistance 3072
dimensional stability 1494-5, 3072, 6565-7
furfuryl alcohol 4709
PEG 1494-5, 3072, 6564-6
PPG 6565
pulping waste liquors 6567
resistance to abrasion 3072
strength 1494, 3072, 6564, 6567
wood/plastic combinations 4712
abrasion resistance 3071
acrylonitrile 3071, 4714
density 6572
dimensional stability 1491, 1493, 3071, 4714
gluing 6466
impregnation methods 3068
methyl methacrylate 1491, 3068, 3070-1, 6573-4, 6575-6
polymerization methods 1491, 3068-9, 3070-1, 4713-4, 6538, 6562, 6571-3, 6576-7
properties 3069, 4713, 6571
resistance to termites 6574
sap-vs. heartwood 6576
strength 4714, 6572, 6575
styrene 1491, 4714, 6573, 6577
styrene/acrylonitrile 3070
uses 3069, 4713
vinyl acetate 3070, 6574
see also **Plasticized wood, Plastics/derived from wood, Strength**

Increment 442, 1122-42, 2760-91, 4369-402, 5464-5, 5468, 6142-67
age of maximum m.a.i. 5588
basal area 1123
diameter 4382, 6143
at different heights 4384, 5642
diurnal changes 2766
estimation from successive inventories 2774
measurement 4387
see also **Dendrometers, Increment borings**
relation to
age 2765
soil moisture 1964
seasonal variation 4384
see also radial
effect of
air temperature 3530
altitude 2074
aspect 5852
climatic factors 4375, 4384
crown dimensions 617, 2754
cultivating 2756
defoliation 4219
depth to water table 3530, 6155
disease 5818
fertilizing 6162
fire 2018
light absorption 4390
precipitation 4382
pruning 2756, 5642
relative humidity 2766
release 5428
seed bearing 4378
soil moisture 256, 3262
soil nutrients 260, 1761, 3580, 3542, 5266, 5428
soil temperature 3530
stand edge exposure 3526
temperature 2766
thinning 2275, 2756, 3262
wind 2766
form factor 4388
girth 4377
see also diameter
growth functions 2753
height
assessment 2760
effect of insect attack 2625
from internodes 2762
relation to
age, d.b.h., height etc. 2761, 4379
seasonal rhythm 329, 3605, 4384, 6153
stages of 4379
in
even-aged stands 2727
plantations vs. natural forest 6146
savanna woodland 4376
stands of vegetative vs. seeding origin 326
uneven aged stands 2689
virgin forest 2120
measurement 6142
methods of determining 2753, 2761, 6142-3
from increment cores 4380
mathematical models 1117
stem analysis 4605
methods of study 1118, 1126, 6161
percent 1091, 1127
prediction 1118, 1128, 6162
radial 6155
relation to form 6154
seasonal 4381
research 2777
second growth stands 3552
single tree
value 2824
understorey 5587
value 2824
variability
annual 2768
seasonal 4371
volume 4374
c.a.i. 4390, 6073, 6159-60
effect of stand structure 2689
forecasting 1129
formulae 1129, 4389, 5588, 6160
from
competitive factor 2727
increment borings 2776, 2778
sample trees 2776, 2778-9
stem analyses 2779
volume tables and tariffs 2775, 2778, 5441
of mixed stands 3878
relation to
bark type 158
crown growth 6177
flushing date 181
growing stock 2773
height-growth 5630
site quality 181
weight 601, 2055, 2062, 5328
see also **Dendrochronology, Dry-matter production, Growth, Phenology, Rings, growth, Stem analysis and Species index**

Increment borings
determination of
fibre length 2896-7, 6281
growth variation 2770
increment 2763-4, 2768, 2776
spiral grain 6656
wood properties 3414, 4482, 4555, 6335, 6656
direction 2764, 4380
effect of
elliptical stems 2764
skin 'plasticity' 2763
injury caused by
preventive measures 1074
precision of estimates from 1123, 2763-4, 2767, 2769, 4380, 6143
treatment and examination of cores 2896-7
tools for 4482

Indicator species 2094, 2134, 3293, 3528, 4360, 6140-1
of ore 268, 5070

Inheritance see Genetics

Injection see Insecticides, Poisoning of trees, Weedkillers, application and effects, &c.

Insect pests of trees 608, 900-1066, 1526, 1689, 2588-2684, 3935, 4030, 4173-4286, 4948, 5048, 5813, 5920-6058
associated insects 4194
attack, diurnal pattern 2660
attack, induced 1047, 2660
attack, relation to planting methods 4237
attacking
bark 1004-40, 1526, 2614, 2655-73, 4253-72, 6013-35
buds 949, 4285, 5956
cambium 2614
damaged trees and stands 1009, 1030, 4273, 4948, 6041
flowers 6008
foliage 936, 950, 1041, 2552, 2599, 2609, 2621, 2627, 2631, 2635, 2679, 4205, 4219, 4279, 5971, 5977, 6036, 6051
fruit, cones, seeds 917, 923, 1060, 2196, 2610, 2648, 4179, 4246,

Insect pests of trees — cont.
4284, 5504, 5931, 5934
grafted trees 5955
pruned and trimmed trees 5854
roots 993, 999, 6037, 6040
seed orchards 5955
shoots 1041, 5955, 5958
stem 1010
stool beds 5949
attractants 907, 990, 1035-6, 2655, 3917, 4264, 6026-9
sex 955, 984, 1013-5, 1025, 1038, 2628, 2665-6, 4263, 6017-9
biology 939, 944, 948-9, 951-2, 963, 977-8, 984, 988, 991, 994, 998, 1002, 1005, 1011, 1050, 1052, 1065, 1803-4, 2667, 2675, 2677, 2684, 4193, 4206, 4216, 4218, 4241, 5933, 5946-7, 5949, 5951, 5954, 5960, 5972, 5989, 6025, 6057
bionomics 923, 939, 944-5, 978, 1039, 1061, 2617, 2626, 2658, 2660, 2678, 4226, 4247, 4250, 4280, 5988, 5998, 6000, 6025, 6052-3
breeding in slash 1045
chemotactic behaviour 1035-6
complexes 4201
control 953, 989, 994, 1005, 1049, 2590, 2593-6, 2628, 2639, 2645, 2652, 2667, 4078, 4193, 4205, 5933, 5943, 5950-1, 5960, 5973, 5983, 6000, 6041, 6051
chemical 915-22, 2604-8, 4184, 5929-32
see also **Insecticides**
chemosterilants 967, 2666
collection for chick feed 967
costs 6038
fertilizing 2624, 4199
international 900
mechanical destruction 967, 988, 2658, 5956, 5997, 6038
natural and biological 908-914, 2602-3, 4180-3, 4194, 4215, 5920-8, 5992
see also **Bacterial diseases, Parasites, Predators, Virus diseases**
plugging holes 6035
pruning 1001, 2676
quarantine regulations 900
removal of duff 1001
silvicultural 1006, 4186, 4247, 5962-3, 6004, 6010, 6012
sterilization of males 2650
sticky bands 2603
timing 4221
trapping 1008, 1014, 6014, 6035
damage 928, 936, 945, 953, 958, 966, 989, 991, 1032, 1077, 2611, 2676, 2682-4, 4247, 5754, 5945, 5987, 6000
assessment 900, 960, 1150-4, 4414, 6845
correlation with site factors 4211
galls 1065, 6055
identification 902
malformations 949, 952, 1002 2654
simulated 5958
to twigs and branches 4201
diapause 929, 4250

Insect pests of trees — cont.
diseases see **Bacterial diseases, Parasites, Virus diseases**
dispersal 4251, 5941, 5987, 6025
phoresy 5940
within the stand 4281
distribution 958, 1039, 1800, 2611, 2641, 4241, 4248, 4253, 4274, 5754, 5976, 5999, 6015, 6023, 6048
in stand 5948
inter-continental 946
maps 940-1, 980, 5815
on tree 936, 967, 1016-7, 1030, 5948
regional 900, 5984
ecology 942, 953, 4218, 4218, 4253, 5946, 5954, 5960, 5973, 5989, 6023
effect of
air pollution 2440
burned sites 6009
chemical composition of host 1029, 4178, 4214, 4264, 6029-31
climate 5984
ionizing radiation 4030
light 6053
physiological condition of host 4177, 6022, 6041
resin content of host 2668, 5935, 6022
shade 6036
stand conditions 6012
temperature 2658, 6053
tree vigour 4264, 6029
effect on
height growth 2625
increment 954, 960, 972, 974, 2679, 4227, 5958
lac production 1041
lateral shoot growth 2607
lumber grade 2600
water conduction 2614
wood anatomy 931
egg(s) 1059
mortality 936
parasitization 959, 4232, 5995, 6002
predators 1007, 4266
survival during winter 4195
emergence 2622
feeding deterrent 6031
feeding habits 1032, 1034, 4178, 4197, 4229
feeding stimulant 4269, 6030, 6032
flight 4251, 4981
period 4253
food consumption and digestion 4240
frass studies 2665, 4254
fungi, associated with 853, 1027-8, 1039, 2676, 4261, 4275, 5938, 6044, 6058
galleries 4253, 6015
fauna of 2671
generations, length of 1042, 6024
generations, number of 1012, 6024
geographic variation 6053
honeydew 2352-3, 4187
host selection 2664, 4225-6, 4178, 4282, 6026-9
by parasites 1048
host specificity 2667, 4175-6, 4203,
identification 902, 989, 1798, 1801, 3327, 4262

Insect pests of trees — cont.
hosts 4247, 4274
keys 902
laboratory bioassay 1034, 5953
laboratory rearing 976, 981, 1020-1, 1026, 1033-4, 1057, 2659, 2662, 2672, 4236, 4248, 5991, 5999, 6022, 6033
larvae 1805
feeding 157, 976, 981, 4229, 4280
hibernation 5962
migration 5962
morphology 3328, 4216
parasitization 5996
tunnelling behaviour 991, 2622
life cycles 925, 948, 951, 1011, 1052, 1061, 2641, 4247, 4268, 4273, 4279, 5955, 5973, 5976-7, 5987, 6008, 6037, 6048, 6051
life tables 967, 1040
light requirements 1001
mass flights 1030
mating 1802
moisture requirements 2659
morphology 945, 1010, 2617, 4268, 5933, 5976, 5988-9, 6051
nomenclature 2588
number of species infecting a tree species 4175-6
of bark see **bark beetles**
outbreaks 2627, 4224, 5983
biological evaluation 5959
course of 1013, 2636, 4233, 5992
early detection 4189, 5939
forecasting 964, 983, 2633
history of 4202, 4213, 4265, 5754, 6068
meteorological factors 967
relation to
drainage 6020
production of pheromones 1013
snow damage 4267
wind damage 4267
overwintering 4190, 4200, 4253
oviposition 928, 2646, 6004
age of needles 1047
measuring potential 6034
period 1060
sites 3328
pheromones see **attractants**
photoperiodism 929
polyyandry 5961
polyphagous 958
population 953
abundance 5052
assessment 1154, 5754
changes 2597
changes in unstable environments 2637
dynamics 2440, 4230, 5937, 5959 5986
fluctuations 2674, 5959, 5981, 5986, 6052
forecasting 4217
locality, effects of 981
meteorological factors 981, 267, 4194, 4223
patterns 5968
phenology 4194
regulator mechanisms 1037, 5927, 5959
relation to
altitude 5959
predators 932
tree vigour 932

Insect pests of trees — cont.
quality and amount of foliage 981-2, 4280
sampling 1016, 1018
studies 971, 981-2, 1016, 2637
study methods
light traps 2601
radio active isotopes 6047
pupae 962, 969, 1798, 2634
mortality 4281
relation to
stem m.c. 3533
resistance to 2598, 4261
relation to
clonal variation 927
leaf characters 950
provenance 2613, 2653, 4209
season of attack 2599, 2632, 2673, 4189, 4194
secondary pests 6021
sex attractants see **attractants, sex**
sex determination 4249, 4257
succession 2597
surveys 901, 4077
symbiosis 70
thermal relations 924, 1001, 1021, 2659, 2674, 4190, 4215, 4253
tumours in 6050
tunnelling behaviour 952
vectors of disease 990, 1027, 1046, 2475, 2548, 2618, 5854, 5861, 6045
see also **Entomology, Geographical Index, and under name of host in Species Index**

Insect pests of wood
see **Borers, Termites, etc**

Insecticides
Abate 5980
acetophos 5954
acrylonitrile 5504
Agrizol 939
aldrin 922, 1064
application
aerial 957, 1009, 1044, 2607-8, 4948
diesel oil 2645
droplet size 957
dusting 922, 1044, 1064
effect of season 2607
aerial vs. ground spraying 6038
aerosols 2643
assessment of coverage 957
'ballistic' control 5997
bark soaking 1011
bark spraying 4242
emulsions 998, 2645, 4258, 6005, 6617
foliar spraying 1000, 4192
fumigation 2620, 2652, 2677, 5504
granular 999, 5930
injection 4246, 5965
low-volume sprays 1009
mist 2643
nozzlespray, 3 tubed 915
smoke bomb p. 569 (Great Britain)
soil 993, 2675, 4244, 4246, 5930
solvents 916
spraying 926, 4235
stickers 916
timing 926, 930, 5936
application in
season 2651

Insecticides — cont.
smokes 5978
to planting stock 4184
wetting agent 934
see also **Sprayers**
As_2O_3 922
assessment of efficacy 954
Azodrin 497
Bactospeine 5971
Bakthane 912
Baygon 4192
behaviour in the soil 2606
Bercema 5971
BHC 926, 998, 2643, 2645, 4234, 4272, 6010, 6037, 6561
p. 569 (Great Britain)
Bi 58 6006
Bidrin 4184, 4192, 4200, 4246, 5965
Biotrol 5971
carbaryl 5990
CCl_4 5504
chemosterilants 1031
chlordane 1064
chlordane E-40 6049
chlorinated hydrocarbons 3055
chlorinated hydrocarbons see under **proprietory names**
Cidial 4242
CO_2 5504
CS_2 5504
Cygon see **dimenthoate**
cytoplasmic interactions 3324
DDT 916, 926, 954, 2607-8, 2675, 5967, 5980, 5983, 5990 6009-10
against
borers 998
foliar spraying 996
side effects 2607
DDT plus lindane 1000, 2606
DDT plus parathion 991
defoliators 916
Delindo 1526
diazinon 4192
dibrom 5980
dichlorvos 5504
DiDiTan Ultra 4272
Dieldrex 4244
dieldrin 922, 998-9, 2651, 4247, 6037, 6561, 6617
Dinozol 939
Di-syston 4246, 5930
Ditox 4224
DL (40% DDT plus 4% lindane) 926
DTHP see **trichlorphon**
'E 605' see **parathion**
effect on
relative humidity 4245
effect of
aquatic insects 2608
arthropod populations 2607
birds 919, 920
fish 918
mammals 2605
pollen 155
root development 5929
rooting 5929
soil fauna and flora 2606
wildlife 918
Ekatin 2615
Ekatin Hepta 2615
ethylene dibromide 5504
ethylene oxide 5504

Insecticides — cont.
Fitofos 6005
fuel oil 1011
Gusathion 939, 2647, 2651
H.C.N. 5504
heptachlor 1064, 2675, 6037
Hlorofos 6006
Ipsotox 1008, 1526
Isolan 4246
'Kerfex-Nebel Korper' 2677
Lapazine (Zn_3P_2) 2652
Lebaycid 2651
Lidykol see **DDT plus BHC**
lindane 934, 998, 2647, 4235, 4247, 4258, 5929, 5936, 6001
Lindasect 20 5936
Maladan 5936
malathion 2608, 5936, 5957, 5967, 5990
Matacil 4192, 5965
Metasystox 5936
Mglawik 4221, 4224
'Midol' (3% DDT, 2% lindane 1.5% chlorbenside) 930
Midol 556 6936
NIA 497
NIA-10242 3753, 4192
nicotine 926
Nogos 5954
Oleofos 6005
Oleoparathion 934
Osmotit-Ua 6014
oxydemetonmethyl 5931
parathion 939, 1471, 4234, 4242, 4245, 6005
Pentalidol 1526
Phorate 497, 954, 4246
phosphamidon 920, 4246, 5980
pine turpentine 1647
pyrethrum 5990
Rapidtox 1044
residues
determination 5932
in trees 5932, 5965
on foliage 5965
safety precautions 2604
'SD' 5967
S.D. 8530 5990
seed extractives 1643
Selinon 939
Sevicin 6049
Sevin see **carbaryl**
Silvodetexan 916
Soldep 5957
Synergid[3] additive 1009, 4272, 4948
systemic 2196, 2615, 3753, 4184, 4200, 4246, 5930-3, 5954-5, 6014
Telodrin 922, 993
Temik 4206
testing 5967
laboratory 933
Thimet 44-D 3753
Thiocron 3753
Thiodan 5936
thiometon 2615
Tiokron 5954
toxicity to humans 2604-5
trichlormetaphos-3 6006
vamidothion 5954
Wolmanit-ips 6014
Xylamon 6014
Zectran 957, 2605, 5932, 5965, 5967, 5990

Insecticides—cont.
Zinophos 3753
Zytron 5980
Insolation see also **Sunscald**
Insurance
covering all risks p. 570 (Sweden)
fire 2470
mutual forest association p. 569 (Belgium)
Interaction of plants see **Allelopathy**
Interception of precipitation see **Fog and mist drip, Precipitation, Rain, Snow**
Intercropping 3723
see also **Agrisilviculture**
International biological programme 3598-9
Intermediate ('ripe') wood 6296
Interplanting 2268
Inventories see **Enumeration surveys**
Irrigated plantations
choice of species for 5583
economics of 4847
soil salinization and its control 420
see also **Canal, Fuel Plantations**
Irrigation
combined with fertilizing 2060
chemical composition of soil 5623
effect on
height growth 3869
soil salinity 263
wood properties 4609
shallow water impoundment
effect on soil moisture 2298
with
sewage water 263, 3869, 5623
see also **Nurseries**
Irritant properties of wood 1362, 2990, 4599, 6407
Isotopes see **Radioactive isotopes**

Jeeps see **Cross-country vehicles**
Joinery timber 6491
water repellant treatment 1467
Joints 1392
bolted 1416, 3017, 6437
corner 6721
dowelled 1611, 3018, 6447
nailed 1442, 3014-6, 6436, 6522
screwed and stapled 3014
tenon 6447
see also **Connectors, Glue joints**
Juvenile wood 4607, 6379, 6415, 6674

Keys
botanical identification 1916, 1925, 3466, 3475-6
entomological identification 3104
punched card 5205
timber indentification 1231, 2879-81
to [African[termites 3325
see also **Wood identification**
Kilns see **Charcoal, Seasoning, Seed**
Knots 1558-9, 3123, 5161
Knottiness 5161

Labour, forest 5677-8, 6176
and population 389
conditions of work 2356
costs 1190, 6192, 6847
Labour, forest—cont.
disputes, settling of 2386
earnings 1190, 6192, 6847
effect of mechanization 6848
ergonomic studies 5680
forest villages 2413
housing 736, 2413
incentives 3980
intensity relation to rotation 4431
legislation 665
organization and planning 5674, 6193
productivity 3231, 6173, 6192, 6847
protection 665
protective clothing 667-8
requirements 663
sociological studies 5674, 5676, 5680
training 663, 1711-2, 6836, 6848
transport 3232-3
trends 3932, 6192, 6847-8
see also **Accidents, Health and hygiene, Safety, Wages, Work studies**
Lac production 2351
hosts and culture 660-1, 3925, 5671-2
see also **Shellac**
Lacquer from plants
quality 1650
Laminated wood 1432-8, 6512-7
beams 1434, 1436, 1438, 1450, 2933, 6465, 6512, 6515-6
bending 1434
boards 6512
effect of
swelling 6514
fatigue in 1433
fire resistance 2933
pests 1442
prefabricated culverts 1456
testing 1301, 1432, 1438, 6514
see also **Buildings, Glues and Gluing, Plywood Strength**
Lammas growth 2051, 5332
relation to provenance 3416
Land use 381-3, 2097, 3290, 4034, 4923, 6805, 6817, 6819
abandoned arable land 6806
agriculture vs. forestry 1698, 4921, 4924-5, 4928, 6173, 6193, 6801, 6815, 6821
and afforestation 4929
and exotic plantations 4928
arid-zone 4922
changes 5399
classification for 3247
classification from aerial photos 4977
ecological basis 1697, 2094, 4924
economics of 1177, 6804, 6813, 6815, 6821
effect on
soil properties 5283
hydroelectric purposes 6820
in the tropics 3608
multiple use 1177, 1697, 4926, 6804
planning 4929, 6816, 6818
policy 1697
soil conservation 4929
surveys 2094, 3213, 6815
see also **Erosion, Grazing etc.**
Landings see **Logging**
Landscape and forestry 1685, 4909-10, 5651, 6803, 6805, 6816, 6832
Landslides 5043
Late wood see **Early and late wood**
Latex-producing plants see **Rubber**
Law in relation to trees and hedges 4934
see also **Forest law**
Layering see **Propagation, vegetative**
Leaf
ageing 127-8
analysis to determine
nutrient status 3347
anatomy 210, 950, 1862, 5133-4, 6771
sclereids 5192
taxonomic value 5207
area 3597, 3373
determination of 5131
effect of temperature 5102
measurement 6127
relations to girth 6127
chemical constituents 81-2, 88-95, 1815-33, 3279, 3343-57, 4835, 4837, 5063-87, 5359, 6746, 6748, 6750-1, 6754, 6761-5, 6767, 6771
extractives 5077
methods of analysis 3343
seasonal variations 127-8
diseases 836, 5897-9
efficiency 3373
extracts
effects on germination 2013
effects on seedling development 2013
reaction with soil constituents 4999
heterophylly 140
length/width ratio 4340
moisture regime 3360, 5264
morphology 141-3, 218, 226, 3345, 3485, 5133, 5135-6
orientation 133
phyllotaxy 139
sun and shade 41, 141-3, 150, 1847
temperature 133
variation 160-1
water relations 252
wax 6767
see also **Fodder, Foliage, Litter, Needles**
Leaf crops 6751
Leaf fall see **Phenology**
Leaf mosaic see **Virus diseases**
Leaf spot etc. 4154-7
Legumes see also **Gorse, Lupins**
Liberation fellings see **Release**
Licences see **Concessions**
Lichen
ecology 2076
Light
absorption of 1738
albedo studies 1972, 5360
as a site factor 1738
at different heights in a stand 1737
effect of
soil conditions 1972
effect on
chlorophyll 129
colour of wood 6310
disease 5852
regeneration 5249
seed size 144
seedling development 302, 3778, 5249, 5539
storey formation in stand 5426
transpiration 3368
interception by canopy 4983, 4986, 5353, 5360
measurement 1739, 3251, 4981-2

Light—cont.
photo-degradation of wood 1366-8, 1412
phototropism 143
radiation 3313, 5249
and topography 1736
balance 1739, 4984, 4986
radiation in the forest 3251
under leafless trees 5356
red and far-red 1848
relation to nutrition 5248
relative illumination 5353, 5539
effect of
canopy density 27, 1737
latitude 20
thinning 1737
weather 20
effect on
ground flora 301
growth 1954, 3521
leaf respiration 1847
relation to
aspect 1737
stand density 1737
wood anatomy 4604
wood properties 2993, 4604
requirements
of planting stock 2244
utilization 5426
see also **Photoperiod, Phototropism, Photosynthesis, Shade**

Lightning
damage 2445
fires caused by 779, 2445

Lignification 1318
histochemical study of 4576-7
of cell wall 1281

Lignin
chemistry 1323, 1325-6, 4533, 4577-8, 6375-8
affect of fungus disease 5855
variation with climate 1319
degradation
fungal 6603
degradation products see **Lignin/chemistry**
extraction 1320-1, 1324
formation 4577
hydrocracking 3152
hydrogenation 4578
in reaction wood 4518, 6287
model compounds 1323-4, 6376
molecular weight 1322
precursors 1318, 2974
reviews of literature on 1207, 6375
specific differences 6376-7
spectroscopy 1323-4, 6376-7
utilization 1399
see also **Lignification**

Line planting and sowing see **Enrichment of tropical forest**

Linear programming 612, 2415, 2810, 2830, 4422, 6230, 6533
management 1180
plywood production 6509
sawmilling 6503

Litter, forest 3289, 5275
amounts 1751, 2055, 2057-8, 3277, 5781
produced by different species 1570, 5003, 5005
sampling methods 3275
seasonal variation 311, 2055, 5003, 5375
calorific values 3282

Litter, forest—cont.
chemical composition 278, 1751, 1763 1817, 3277, 3279, 3554, 4997, 5239, 5284, 5375
decomposition 41, 1773, 2058, 3277, 4997, 5239
biochemical changes during 5016
by microfauna 5017
by soil fauna 40-1, 47, 50, 56, 1773, 3280-1, 3305
effect of
tannins 5019
fungi involved 47, 50, 1770
rate 50, 3276, 3278-9, 3280-1, 3282-3
release of nutrients during 4997
seasonal changes 50, 1750, 3276, 4998
study methods 50, 5016-7
succession of fungi 39, 47
variation with species 41, 3276
degradation of 2, 4-D in 2486
effect of
fertilizers 1751
fire 311
effect on
germination 314
ground flora 303
herbaceous weeds 2015
infiltration 5004
seedling growth 2012
water holding capacity of soil 61
extracts
Fe-mobilizing capacity 4999
fauna 3278, 3306, 5017, 5031
fire hazard 4048, 5781
interception of rainfall by 5004
leachates see extracts
measurement 3598
mycoflora 1771, 3300-1
protozoa 3302
removal
for insect control 1001

Loading and unloading 5689
equipment and methods 721, 6119
mechanization 4776
tree-length logs 3116, 4776
with
grab 721, 3116
tractor-mounted cranes 3987, 5741
work-studies 3987, 4776
see also **Bundling, Cranes**

Loans 6828

Log(s) see **Grading, Storage, Timber measurement etc.**

Log rules see **Timber measurement**

Logging 2365, 3930, 4859, 5688, p. 378 (Indonesia)
accidents 666
clearfelling vs. selection felling 2833
close utilization 6845
conservation of advance growth 2125
co-operative 3980
costs 1185, 2882, 3932, 4436-7, 4440, 5687, 5692, 5736, 6208
damage 2377, 3646, 4289
relation to insect attack 6041
economics 2832, 3934, 6208
effect on
fish 1814, 5062
landslides 5043
regeneration 674, 4289

Logging—cont.
soil properties 1073, 3547
equipment
maintenance 2390
extraction
right of access to coupe 6826
'full tree' 3933
in mountains 5687, 5723-4, 5736
in selection forest 5691
labour requirements 3932
landings see also **storage logs**
losses
top breakage 2729
manual 669-70, 2355
mechanization 676, 692, 1185, 2125, 2391, 3928, 3932-4, 3936, 3945, 3985, 4437, 5687, 5723-4, 5738, 6208
multi-purpose machines 676, 687-8, 726, 2367, 3980-1, 5435, 5692, 5694
of thinnings 2377
on erosive sites 5045
operation research 4443
organization and planning 671-2, 674-5, 684, 2364, 2377, 2832, 2840, 3929, 3932, 3980, 3985, 5689-90
primary conversion 690, 3936
at stump vs. sawmill 3933
automation 3936
mechanization 3936
relation to
browse 3341
silviculture 6173
short-wood 3933
small trees 1185, 2375, 2380
systems, analysis of 3932, 3934
text book 671, 690, 692, 3945
tools and equipment 692, 3964, 5702
tractor 3931
training of workers 670
tree-harvester see **multi-purpose machines**
trimming, work study 1186
whole-stem 703, 2380, 3931, 3933, 3969, 4440, 5434, 5720-1
untrimmed 5720
whole stem vs. long plus short logs 5719
whole tree 5696, 6114
wind-thrown timber 689
work studies 2385, 3940
see also **Balloons, Barking, Costing Costs, Felling, Saws, Transport, Work studies**
waste see **Slash, Waste wood**

Lorries 3975
with trailer 5744
see also **Hauling, Skidding**

Lumber see **Timber**

Lupins 582-3
light requirements 1954

Mammals
biology, textbook 71
damage by 887, 2577-8, 5813, 5919
assessment 886
ecological studies 5056
see also **Cattle, Deer, Rodents &c., Fences, Wildlife**

Management, forest 1158, 1164, 1167, 4415, 4417, 4859, 5410, 6074, 6172-3, 6177, 6183

Management, forest—cont.
allowable cut 2812, 4419-20
determination of exploitable age 1159-60, 2809, 6176
ecological basis 364, 6180-1, 6188
economics of 1157, 4425, 6174, 6176
endowment forests 2817
even-aged stands 6175
experimental forest 5419
flood-plain 5347
growing stock levels 6148
initial development 1163
intensive 1157
intergration with industry 6174
linear programming 1173, 1177, 2810, 2812, 2830
mathematical models 1140
mountain 4419
native reserves 6174
objects
changes and options 6194, 6774, 6776
essential oil production 3922
financial 4427-8, 6777
maximum yields 385, 1161, 4418, 6185, 6845
multiple use 1177, 1693, 1696, 1699, 1809-10, 3200, 3210, 3322 4912-3, 4926-7, 6173, 6776, 6804
sustained yield 4420, 4424
veneer production 3653, 6179
operational research 4442-3
organization and methods 1079
principles of 1161, 1163, 1168, 6176
private 4425
production forecasts 4392, 4395
relation to industry 1441
relation to silvicultural system 6190
relation to timber trade 6174
small woodlands 1173, 6824
spatial distribution of working units 6182
suburban forests 4915
tables 4392-3, 4395
textbooks 1156, 1166
tropical forests 3656, 5408-9, 5411, 5415, 5600
typological basis 392-3
units 1079, 1169, 4416
work study 2362
see also **Computers, Mathematical models, Rotations, Working plans, Yield regulation**

Mangrove forest 2105, 3632
salt and water relations 5088

Manures see **Fertilizers**

Manuring, green see **Green manuring**

Mapping
site types 4976
soils 5032
see also **Surveys, aerial**

Maps
bioclimatic 3258-9
forest products industry 1733
forests and forestry, 378, 1733
geobotanical 2068
prepared from aerial photos 2796
site types 1755
soil 1755, 5032
vegetation 1733, 5399
see also **Geographical Index**

Marine Borers
chemical control 6496

Marine borers—cont.
damage 4744
distribution 6612
exposure tests 3096-7, 6496, 6611-3
illustrated catalogue 4742
mechanism of boring 3100
protection against 3099
resistant timbers 3098-9, 4743-4, 6610
see also **Preservation, wood**

Marine structures 3098, 6496, 6531
see also **Piles**

Marketing 2845, 2850, 4453-4, 4859, 6221, 6237, 6241
long-term contracts 4465
of tropical timber 6224
policy in underdeveloped countries 4455
research 1196, 1198, 2846, 6219, 6231
sales promotion 6219
season 5830
source of decay 5830
supply and demand
econometric analysis 4459
projecting trends 4460
TRADA softwood handling project 6231

Martens 5055

Mathematical methods 6072
curve smoothing 6080
models 1140, 2367, 2783, 2813, 2822, 2838, 2856, 4404, 5148, 6194, 6280
competition within stands 2782
financial yield 2816
growth 2688
nursery practice 503, 2197
sorting logs 1422
total yield 2054
transport problems 2816
use in forest products industry 4667
use in logging 4403
orthogonal regression 3245
PERT 5675
tests of random distribution 2079
see also **Computers, electronic, Linear programming, Statistical methods**

Maturity 2787
absolute 2808
financial 1182

Mechanization of forest operations 473, 581, 681, 2361-6, 2405, 3825-6, 3846, 3856, 3928, 3947, 3987, 5645, 5683, 5745, 6781
costs 4437
regeneration 3665
slash disposal 3937
see also **Logging, Nurseries etc.**

Medicinal plants 579, 1624, 1636, 4527, 4837-9, 4841-2, 6753
see also **Antibiotics, Chemical constituents of plants**

Mensuration, forest 1079, 1080, 1083, 1085-6, 6074
complete tree 2740
errors 6126
instruments 1082, 1084, 1087, 2360, 2691-2, 2699, 6073-4
metric system implications of 6229
new methods 1078
research 1088-93, 2687, 2690, 2693-8

Mensuration, forest—cont.
review 1078
text books 4296
see also **Basal area, Diameter, Height, Enumeration surveys, Increment, Timber measurement, Volume &c.**

Meristem
development 1908
histochemistry 1908
structure 138

Meteorology see **Climate, Fire danger**

Mice and Voles
control 888, 4017, 4164, 5913
damage 3806, 4163-4, 5913
seed and seedlings 889
survey 4162
to treated wood 1534
population studies 889
review of literature 888
see also **Rodents**

Microbiology
of decay-free wood 4096

Microclimate 4988, 5356
diurnal air temperature changes 3253
effect of
canopy 4985
forest clearings 4987
grass and litter 2425, 4987
orientation of planting rows 570
thinning 5375
increment 570
in young plantations 2425
methods of measurement 1735, 3255, 5357
nocturnal changes 4985
of bogs 26
relation to
canopy density 27
forest type 5375, 5580
occult precipitation 1740
topography 27
research 17
review 25
temperature profiles 4987
text book 24
vertical gradients 3257
see also **Forest influences, Shelterbelts**

Mildew 2568, 4159

Mine timbers
conversion 3939
fire-retardant treatment 1499
importance of form 4668
loading 3939
markets 1200
preservation 6555
species for 4561
strength 4561, 4668, 6555

Mining
and forestry 6774

Minor forest products 3581, 3908-9, 4832, 4845, 4868, 5671, 6228, 6742, 6767, 6769, 6771
fruit 3506

Mist, see **Fog**

Mist, artificial see **Propagation, vegetative**

Mist-blowers see **Sprayers**

Mistletoes 5811
artificial infection of host 822, 4072, 5809
attachment to host 2494, 5124
biochemic effect on host 821

Mistletoe— cont.
chemical constituents 5081
control
biological 5807
clear felling and burning 5810
costs 4073
economic effects 4076
effect on increment 820, 2490, 2493
effect on wood properties 5806
embryology 5124
endophytic system 2494
growth 5805
variability to infection 822
klendusic factors 4071-2
parasitism 821
rate of spread 2492-3
seed dispersal, germination etc. 5808
specialized forms 5124
translocation to host 4071
Mites
damaging conifers 4287
key 4287
phytophagous 4288
population estimation 1072
Mixtures 400, 2350, 3893, 5438
arrangement and layout 2268, 5599
choice of species for 2268, 3577
competition in 414, 584, 3577, 3616, 3666, 5341, 5585, 5598, 5652
effect of soils 400
effect on ground vegetation 5344
increment and yield 5424
management 390, 414, 3878, 5425
natural regeneration in 2131, 3675
profitability 399-400
regulation 3874, 3881, 5598
silviculture of 3666, 5425
stand structure 3659, 3666, 6166
tending 3875
thinning 612, 3878
time of planting 5599
vs. pure crops 399-400, 5424
see also **Nurse and auxiliary species, Interplanting, Pure crops, Underplanting**
Moisture requirements see **Water relations**
Moisture, wood 1273-92, 2935-46, 4542-51, 6314-26
adsorption 4546
by dry wood 6315
capacity 6315
effect of drying temperature 6316
changes in 1287
conductivity 2945
effect of steaming 4752
desorption 1309, 4546
determination 4542
electrical methods 6530
moisture meters 2935
distribution in the tree 6314
effect on
decay 6491
deformation 1287, 2940
dielectric properties 1271
dowelled joints 3018
electrical properties 2966
strength properties 2966, 4565-6, 4568, 6364
equilibrium m.c. 1278, 4543, 4546, 6318-9
fibre saturation point 1279, 2936, 4542, 4551
of reswollen wood 2937
Moisture, wood— cont.
freezing 4547, 6325
hygroscopicity
effect of
air conditioning 1277
steaming 3105
in chips 1273
in houses 1276-7, 6530
in living trees 3533
measurement 1107, 1273, 1276-7
movement 2945
refrigerated control 3115
relation to
density 2935-6
grading 1275
heartwood formation 2912
incipient decay 1276
seasoning schedules 6631
site 6121
temperature 4546, 5255
wood properties 4610
sorption
effect of
extractives 4551
heating 1247
relative humidity 1274
hysteresis 4545, 6316-7
relation to density 6334
variation
position in tree 6314
position in use 1276
sapwood and hardwood 6314
seasonal 1277, 4544, 6121
seasoned wood 1276
tree to tree 6314
see also **Permeability of wood, Seasoning, Shrinkage and swelling**
Moles 1776
activity in forest-soil 57
Monocultures see **Pure crops**
Mor(s) see **Humus**
Morphology, plant 136-44, 1859-65, 3391-400, 5125-44
variability 3391
Mortality, analysis of 2049
Moss(es) 1776, 3908, 5018
biochemical effects 2014
decomposition by fungi 5018
gamma rays 776
effect on regeneration 2014
relation to forest type 3617
relation to litter/humus formation 3537
sporal regeneration after fire 2021
Moulded products see also **Plastics**
from chips 6729-31
Moulds
interaction with rot fungi 3091
prevention 3755
Mountain forests 1171-2
Mulching
at time of planting 2823
effect on
gas exchange 3778
growth 3778
K deficiency 3778
seedling growth 3761
seedling survival 3761
for control of weeds 2259
with
bark 3769
garbage compost 3778
litter 3761
oil based mulch 3843
Mulching— cont.
paper 2823
peat 3761
polythene 3761
Mull see **Humus**
Municipal forests etc. 1699, 4932-3
Mycology see **Fungi**
Mycorrhiza 280-9, 1979-97, 3555-64, 5286-91, 5619
anatomy 284, 5289
classification 283-8, 1978-81, 1995, 3559-60, 3562-4, 5289
development 2003
effect of
atmospheric pollution 2438
fertilizing 286, 1989, 2205, 5526
soil conditions 47, 1987, 5288
soil sterilization 5525
weedkillers 286, 3557
effect on
diseases 2501-2, 5820
microbial activity of rhizosphere 1996
root respiration 1992
seedling survival 287
fungi 1991
antibiotic produced by 5820
culture of 288, 3556, 3558, 5287
effect of growth regulators 1994
interaction with bacteria 3561
mycelial types 3556
mycoflora, associated with 1982, 3562
relation to forest humus 362
relation to nematodes 1069, 6060, 6063-5
relation to root disease 2501
in nurseries 1981, 1987
in tropical lowland rain forest 5291
in virgin forest 5288
inoculation of 262, 1990, 1992-3, 3556, 5523-5
nodules 285, 1995
nutrient, uptake of 285, 1985-6, 3546
on forest litter 3556
physiology of 1986, 3557
populations, estimates of 1983
relation to
frost resistance 286
vegetation type 2074
succession types 3563
synthesis in culture 288, 3558
terminology 283 1978
morphology 5305

Nail-holding properties of wood 3016, 4571, 4632-3, 6374
Nails 3016, 4632, 6436
Nails and nailing 4633, 6435
National parks 1682-4, 3604, 4914, 6809, 6811-2
National parks 1682-4, 1694
Nature conservation 1682, 1686-8, 2077, 2104, 3200, 3203, 3604, 3624, 5331, 6174, 6803-4, 6807
exceptional trees 6809
influence of forest practices 4912
management of reserves 4913
relation to public recreation 4911
tree preservation order 1686
Naval stores see **Resin, Turpentine**

Needle-blight, needle-cast etc. 874, 2553-64, 2566-7, 4144-7, 5828, 5886, 5889-92, 5895
  control 4148
Needles
  absorption of water 5194
  anatomy 3464
  chemical constitutents 2061, 3174, 5073
  cuticular secretions 5194
  diseases 6069
  effect of fertilizing 5619
  effect of weedkillers 4065
  extractives 1635, 3938, 5071
  morphology 1860, 1914, 3468, 4065
  oil 1635
  on long shoots 5109
  resin canals 1861, 5132
  stomata 1859
  variation
    in efficiency with age 2561
    in nutrient content 2278
    with relative illumination 1860
  vitamins from 1635 4835, 6750
  see also **Foliage, Leaf**
Nematodes 47, 5813, 6061
  biology 1070
  control
    bibliography 1067
    biological 1068
    chemical 1067, 6050
  effect of fertilizers 3303, 4120
  effect of underplanting 3303
  feeding on mycorrhizal fungi 1069
  for soil aeration p. 378 (Great Britain)
  in forest soil 1068, 3303
  in nurseries 826, 1068, 6060, 6062
  parasites of insects 1024, 2656, 2661, 5921
  relation to
    fungus attack 4120
    mycorrhiza 6060, 6063-6
  resistant species 6060
  taxonomy 2475
Nesting boxes see **Birds**
Nitrogen 1817
  cycle 2057-8, 3537, 3548
  fixation 285, 1997
    by conifers 5597
    by hedgerow trees 5656
    by legumes 5597
    by non-leguminous plants 100, 267, 3555, 5286, 5597, 5656
    by non-symbiotic micro-organisms 1769
  metabolism 3538
    effect of disease 4087
  mineralization
    effect of fertilizers 3853
    incubation experiments 596, 3858-4
  release from litter 1751, 3537, see also **Mycorrhiza, Soil(s)**
  see also **Interplanting, Underplanting**
Nomenclature
  insect pests 2588
  timbers
    common and vernacular 4483, 6259
    scientific 6259
  trees and shrubs
    common and vernacular 3463, 5201
Nomenclature— cont.
  trees and timber
    common and vernacular 3463
  see also **Terminology**
Nomograms, use of 1103, 2695, 2703, 2736
Nurse and auxiliary species 2266
  see also **Interplanting, Underplanting**
Nurseries and nursery practice 389, 502-23, 541, 2196-247, 3756-80, 5407, 5445, 5515-54, 5562
  artificial lighting 3776
  conference 2156
  continuous production 2203
  depletion of nutrients 3766, 5521
  diseases 507, 835, 854, 3779, 4083 4088, 4093, 4098, 5823-5, 5828, 5888
    damping off 5525
    seed 825-6, 3749
    seedling 825-6, 3749, 5826
    see also **Fungicides**
  effect of
    flooding 4012
  for breeding programmes 147
  frost damage 3774
  hydroponics 2218
  insect pests 497, 3753, 4204
  irrigation see watering
  lifting stock 5515
  mapping crop condition 2201
  mechanization 578, 3756, 5515-6, 5554
  mulching 3761
  mycorrhiza 1981
  nematodes 826, 6000
  on agricultural soils 1987
  planning, use of models 503, 2197
  plastic containers 543-5
  potting media 2246
  protection against
    frost 5538
    rodents 2584
  research 502
  root pruning 2009, 2223-4, 5565
  shading 5528, 5538-9, 5609
  shoot pruning 5515
  site 505, 836, 5518
  site preparation 505
  soil analysis 2202, 5518
  soil nutrient loss 2210
  soil pH 5518
  soil requirements 3532, 5518
  soil treatment 2203-4
    acidification 3764
    addition of bark 3769-71, 5522
    addition of peat 2205, 5522
    bacterial fertilizers 513
    composting 2213
    fertilizing 505, 508-9, 511-2, 1969
    fumigation 827, 3752
    inoculation with mycorrhiza 286, 2205, 5523-5
    insecticidal 5929
    sterilization 506-7, 2200, 5525
    see also **Fertilizing, Mulching**
  sowing 5551
    broadcast vs. drills 3750
    catkins suspended over beds 504
    density 514-5, 523, 2215, 3774-5, 5514
    depth 2216
Nurseries and nursery practice— cont.
    drills 3772
    in plastic containers 542, 2112
    in pots and tubes 544, 3761
    machines for 3795
    season 3774-5
  top pruning 5609
  transplanting
    boards 3777
    into bags 5515
    into 'Pesmic bricks' 2245
    into pots 3761
    machines 2219, 5515
    physiological effects 2220
    'roll-seedling' method 516
    season 517
    with earth balls 517
  watering 2206, 5528-9
    relation to seedling size 3532
  weed control 519-22, 2272, 2478, 5532-5, 5537
    chemical see **Weedkillers, application, effects etc.**
    frequency 5530
    soil fumigation 5531
    timing 5530
  work studies 663
  wrenching 5515
  see also **Fertilizing, Mulching, Planting stock, Propagation, Seed, and Species Index**
Nut crops 3910, 4252
Nutrients, plant 327, 1967
  accumulation 4064, 5068, 5284
  Ca 3542, 5284
  C/N ratio 3537
  content of
    ground flora 600, 1763, 2287
    leaves 1822, 3346, 5069
    trees 602, 1822, 2287, 4794, 5265, 5328
  cycle 278, 1762, 1822, 1969, 3547-8, 5064, 5089, 5277, 5284, 5307, 5359, 5364, 5619
  depletion in nurseries 2210
  distribution in tree 118, 1817, 1821, 2285, 5064-5, 5068-9, 5284, 5352
  effect of age 3345
  in rain
    effect of plants on 34, 1762-3, 1974, 5284
  interaction 1970, 3542, 3544, 3546, 4064, 5267
  leaching 3550, 4997, 5284
  loss in slash 273
  Mn 270
  relation to
    dry matter production 5064
    flowering 5307
    growth 5266
    light intensity 271
    seedling morphology 5315
    site quality 3345
    soil nutrients 250, 262
  requirements of different species 261-2, 2288, 3516, 5068
  seasonal variations 116, 1817, 1822, 2278
  trace elements 268, 3344, 3555, 5066
  uptake 1970, 2285, 3268, 3516, 3766-7, 4063-4, 5521, 5619
    by developing seed 2217
    by ground flora 2285

Nutrients, plant—cont.
by seeds and seedlings 262, 278, 3593
effect of
enzymes 1986
mycorrhiza 285
soil aeration 476
soil moisture 3540
soil pH and m.c. 270
measurement 3541
relation to
age of crop 2210
sampling 5066
seasonal 3541
see also **Deficiency, Fertilizing, Nutrition, Soils**
Nutrition, plant 260-79, 1965-77, 3440, 3537-54, 5067, 5265-85
distribution in tree 5619
effect of fungus 4103
effect on resin flow from needles 4177
research 5271
role of root excretions 5280
studies, in culture 1967, 3538-9, 5268, 5270
use of foliar analysis 270, 595, 3540, 3544, 5063, 5270
see also **Foliage, analysis to determine nutrient status, Hydroponics, Mycorrhiza, Nutrients**
Oil, pollution by 764-5; p. 782-3 (Sweden)
Oils
essential 1341, 1635, 1649, 2350, 3175, 4843, 5073, 5658, 6732, 6761-5
bactericidal properties 6763
bibliography 6764
variability 3922
leaf 1649, 2350, 3922
sandal 4826
seed 4844, 5658, 6766
wood 1341, 6732
see also **Fats, Turpentine &c.**
Old wood 1372
Oleoresins see **Resin(s)**
Ontogeny in plants see **Age, Growth, Phenology**
Optical properties of wood 1263-4
Ornamental trees and shrubs 640, 3906, 5654-5
fertilizing 2296
insect pests 2620
Parkland trees 1921
vegetative propagation 3781-2
dwarf forms 3757
watering 2296
winter hardiness 3518
see also **Arboriculture, Roadside plantations, Street trees**
Osiers
fertilizing 2295
growing 2087
insect pests 958, 4226, 5988
weed control 658

Packaged timber 1548-9, 3094
Packing containers
for
fruit and vegetables 1479
see also **Pallets**
Paints and painting 1413, 6496, 6550, 6733
Paints and painting—cont.
effect of pre-treatment 4665
Palaeobotany p. 201 (Germany)
Palaeoecology 2068, 2085, 3611-2, 5339
comparison with modern vegetation 334
evidence of
climatic changes 334
fire history 2070
migration of species 2069
soil development 28
pollen analysis 330-1, 333-4, 338, 3177, 3610, 3613, 5337
radiocarbon dating 5336, 6384
see also **Fossil wood and Geographical Index**
Pallets 1457
costs 6236
manufacturing models 6236
Palms 940, 3471, 3910
Paper
oil absorptive pp. 782-3 (Sweden)
properties
related to wood properties 4788, 6675, 6680
Paper making 4800
without additional water p. 569 (Denmark)
Parasites of insect pests 1003, 1037, 1065, 2602, 2640, 2658, 4181, 5924, 5943, 5945, 5954, 5969, 6040, 6051, 6057
bacteria 912, 2630, 5979
complexes 4276, 4277, 5923-4
fungi 4191, 5979, 6039
habitat selection 5926
handling 6042
host(s) 5925, 5970
alternate 1062
selection 1048, 4256, 6044
specificity 5921
host/parasite synchronism 992, 1053, 4212, 5937
hyperparasites 2612, 4276-7, 5924
insects 947, 967, 987, 992, 1002, 1022, 1053, 1058-9, 1062, 1066, 2602, 2617, 2623, 2640, 2663, 2669, 2672, 2676, 2680, 4196, 4208, 4212, 4232, 4255-6, 4270-1, 4276-9, 5923, 5925-6, 5944, 5947, 5956, 5969-70, 5975, 5985, 5987, 5996, 6002, 6016, 6040, 6042-3
attracted by fungus 6044
distribution 2638
life cycles 5970
microsporidians 5979
mites 2671
nematodes 2661, 4277, 5921
on exotic insect pests 5923
phenology 5970
rearing 5956
see also Bacterial diseases, Insect pests, biological control, Virus diseases

Parasitic (higher) plants 3576, 5813
see also Mistletoes

Particle board 1587-611, 3142-6, 4809-10, 6706-19, 6721
automation in production control 1594
binders 6718
chip sorting and orientation 1595
competition for raw material 6245
Particle board—cont.
conference on 1424
defects, detection of 1593
density 6723
determination of resin content 4812
dimensional stability 3143, 3145-6, 6719
dowel joints 1611
durability 6711
economic aspects 1597-8, 6245
effect of
closure rate and pressure 1599, 1600, 6716
m.c. of chip mat 1599, 6716
m.c. of chips 1594, 1601, 1608
m.c. of sawdust 1606
pressing temperature 1608, 1610
resin content 1598, 4814
resin selection and binding factors 1600
solvent extraction 1605
species 1597
wood extractives 1603-4
effect on wood utilization 4476
elasticity 1591
extrusion process 3142
fatigue 6373
finishes 3142
fire-proofing 3076-7
fire resistance 4717, 6580
flakeboard 1600
from
bark 1616, 6713
coconut palm wood 1596
mixed hardwoods 1597
mixtures 1604
sawdust 1604-7, 6712
softwood sawmill waste 6232
gluing 4641, 6712, 6717
hardening 1598
heat treatment 3142
industry 4477
effect on forest management 6245
joints, corner 6721
mat formation 1594
mixing chips and binder 4813
multi-ply 1603
nail and screw-holding properties 2969, 6710
permeability 4820
physical properties 1590, 4817-8, 4820
post-steaming 6719
preservation 6562
pressing 6718
pressing schedules 1594, 1599, 1609-10, 4815-6, 6716-7, 6719
pretreatment of chips 3145
production planning 4810
quality control 1594
calculation of quantities required 4810
research 1599, 1601, 6716
resin and resin substitutes 1603
sanding 6486
sawing 6429
species for 1605, 4809
spring-back 6719
statistics 4477
steam-flow in press 4816
strength 1590, 1592, 2962, 6714
surface overlays 1589, 6720
surface quality 4785
swelling and water absorption 1590, 3142, 3144, 3146

Particle board—cont.
testing 1589, 1590-2, 1598, 2962, 3143-4, 6348, 6706-9, 6711, 6713-4
textbook 1587
theoretical studies 1611
thermal properties 3076, 4539, 4717, 6580
types 6714
uses
manual 1587
building 4817
panels 6527
veneered 4819
water repellent 1598
weathering 4814
without binders 1602, 1607
see also Chippers, Chips, Moulded products, Fibreboard, Strength
Pasture see Grazing and pasture
Pathology, plant 4075, 4944
documentation 3218
Peat
mosses 5018
Peatlands 5619
afforestation 3836
drainage 588-90, 1777, 5612
fertilizing 2281-4
nutrients 274
research 1756, 1786, 5040
roads on 740
see also Afforestation
Periodicals 3237
F A O bibliography 3238
forestry 3243
mycology 3240
phytopathology 3240
plant ecology 3239
Permeability of wood 1288-94, 2942-8, 4552-4, 6326
diffusion coefficients 1291, 1293, 2948, 4553-4, 6326
effect of
extraction 4552
m.c. 1291, 4554
pH 2946
stain fungi 1288
lateral 6326
relation to
specific gravity 1291
review 1289-90
study methods 2948
to air 1294
to organic solvents 2947
to various solutions 1293
Phenology 328-9, 1957, 2065-7, 2141, 3521, 3605-7, 5264, 5332-3, 5351, 6067
bud development 3382, 3607
bud formation 329, p. 379 (Switzerland)
exotics 309, 3691
flowering 137, 309, 2027-30, 3404, 3436, 3590, 5307
flushing 181, 328, 3607, 4005
foliage production 319
frost hardiness 247
fruiting 309, 315, 2028
fungus spores 4980
growing season 3381, 3607
height growth 329, 3605
herbaceous ground vegetation 796, 2067, 4054
heritability of phenological characters 3590
Phenology—cont.
Lammas shoots 319, 3416
moisture content of foliage 5783
pollen dispersal 4980
radial growth 4381
relation to
altitude 2074
climatic change p. 379 (Switzerland)
provenance 450, 1884, 3415, 3422, 3607, 5154
topography 3418
root growth and development 116, 2003, 5546
seed dispersal 3436
seed fall 6007
shoot extension 116, 3420, 3712, 5109, 5130
xylem sap chemistry 5362
see also Dormancy, Photoperiod
Phloem 5093
anatomy 2924, 6301
development 1255, 2925, 6302
evolutionary stages 2924
formation 6302
histology 1255
seasonal variation 1255
secondary 1254
sieve elements 4528
sieve tubes 111
types 2924
Photogrammetry see Surveys, aerial
Photography
of canopy 1122
stereophotographic illustration 15
use for measuring shoot growth 1122
use in mensuration 2762
Photoperiod
effect on
assimilation 1848
flowering 5138
frost hardness 1956, 3524
germination 3776
insect pests 929, 978
leaf characters 143
rooting of cuttings 245
seedling development 3417, 3776
shoot and needle elongation 245, 1953
wood formation 245, 3402
interaction with
growth regulators 5498
light quality 5498
temperature 3417, 3607, 5257
dormancy 1953, 3606, 5257
relation to provenance 1952, 3417
Photosynthesis 99-105, 3364
calculating rate of 105, 1889
clonal variation 186
diurnal variation 1850
effect of
altitude 3371
CO_2 concentration 5164
insect attack 319
leaf orientation 133
light intensity 105, 143, 186, 5164-5, 5248
mineral nutrition 5248
positition of leaf in canopy 133
provenance 1889, 5163, 5165
relative humidity 5101
soil moisture 3366
measurement 102
seedlings 5162
several shoots 1849
Photosynthesis—cont.
temperature 105, 133, 1850, 5101, 5254
relation to
respiration 5163
surface area of stem and bark 2739
seasonal variations 102, 3366, 3371
translocation of products 3366
Phototropism 159
Phylogeny 188
relation to wood anatomy 4503
Physiology, plant 99-133, 1834-58, 2495, 3360-88, 4290, 4347, 5088-123
annual review 100
aspiration of bordered pits 4511
assimilation 5102-3
in artifical light 1848
relation to
leaf area 3373
yield 3375
biochemical interrelations with other plants 5302
cell growth 100, 4505
cell structure 100
chlorophyll 1826, 5087
relation to light intensity 129
synthesis 4016
CO_2 exchange 5775
effect of mulching 3778
effect of weedkillers 4060-1
of grafts 3372
diseases 858, 2495, 4103, 4144, 5848, 5877
electric fields 100
electrical conductivity of leaves 1858
electrical response to mechanical stimulation 3387
enzyme
activity 1822, 1980, 5104, 6296
distribution 6296
freezing 1959
gas exchange 103, 5091
and stand structure 3374
latex production 5195
manual 99
metabolism 1824, 3413
amino acid 100
cell 100
fat 100
Fe 4019
inhibitors 5086
P 1844, 4016
relation to insect attack 4214
S 100
terpenes 3378
moisture stress 1857
monograph 1834
movement of assimilates 118, 2903
of fungi 1514
of parasitism 821
osmotic pressure 767, 1858, 3361
pigmentation 100, 129
plastids 5121, 5155
relation to disease 1844, 4074
relation to surface area of stem and bark 2739
research 1823, 1844
reserves and their conversion 113-4, 116, 119, 1844, 2278, 3376
exudation 6022
respiration 4021, 5089
response to parasites 100

Physiology, plant— cont.
salt regulation 110
seasonal changes 1838
senescence 2225
study methods 1857
controlled environment 100
infra red gas analyser 104
sand culture 3538
suction force 767, 1858
synthesis of
alkaloids 100
carotenes 100
protein 100
topophysis 321
water
balance 1838, 2891
conduction 1292, 2891-2
measurement leaf water potential 3360
movement in trees 2915
relations (internal) 1838, 1857
stress 4505
see also **Allelopathy, Dormancy, Flowering, Frost hardiness, Growth, Growth regulating substances, Lignification, Nutrition, Photoperiod, Photosynthesis, Respiration, Sap, Transpiration, Translocation, Water relations** &c.
Phytopathology 5814
Phytopathology annual reviews of 2475
Phytopathology see also Fungus diseases &c.
Phytotron 101
Piles 6496-7
jointed 1416
see also **Preservation**
Pit props see **Mine timbers**
Planing 3012, 4630
machines 1390
optimum cutting angle 4631
Plant chemistry see **Chemical constituents of plants**
Plantations 419, 445, 5407, 5576-7
accelerated cultivation 561-2, 4856 5624
clonal vs. seedling origin 3433
costs 2823, 3679, 3682, 5572
cultivation 606, 608, 2299, 5583
establishment 396, 437, 581, 3682, 5559, 5570, 5572
fertilizing 561-2
inferior growth of second rotations 3552
orientation of rows 570, 585
provision of shelter 396
pulpwood 5583
relation to industry 4956
relation to vegetation types 5559
spacing see **Spacing**
stand structure 2789
State programme 3661
symposia 4956
vs. natural forests 2080
water relations 5583
weed control 561-2, 607, 5602, 5605
see also **Accelerated cultivation of fast growing species, Afforestation, Fertilizing, Irrigated plantations, Poplar growing**
Planting, 552-64, 2250-64, 3806-26, 5559-73
check 3821
Planting— cont.
costs 564
density 2261
depth 3821, 4237, 5571-2
holes 5568
see also **Hole-diggers**
in flood plain 5649
in fresh slash 2258
in frozen soil 389
in mixtures 5599
machines 389, 2260, 3806, 3825-6
methods 389, 3806, 3824, 3835, 4237, 5559
angle planing 3838
effect on survival 3809
effect on timber quality 474
gun 3795
hoe 5568
in sand dunes 3843
'mud capsule' 3818
on
beetle killed stands 4259
plough ridges 476
road banks 2325
side or bottom of furrow 5570
terraces 3844
upturned sods 474
season 554, 2220, 2263-4, 3808, 3815-6, 5571, 5581-2
vs. direct sowing 3801
work studies 564
see also **Afforestation, Fertilizing, Planting stock, Spacing**
Planting stock 3843, 5821
accelerated production 6781
age 3810-1, 5555, 5563
effect on insect attack 4237
ball 2112
bare-rooted 5571
after raising in tubes 5541
cutting back 3808
cutting vs. seedlings 3433, 5564
damage to 2256
exposure 558-9, 2255-6, 3819
fertilizing 563
field performance relation to nursery practice 2196
fungicidal treatment 3820
grading 287, 3813, 5562
handling 5551
large 553, 3794, 3811
'mud capsule' 3818
packaging 2196
packing and storage 3814-6, 3820, 5567
see also storage, cold; storage in plastic bags
physiological condition 556
potted vs. bare-rooted 541
puddling 3819
quality 5574
raised
at different altitudes 5581
in boxes 5551
in copper lined trays 5553
in earth blocks 5550
in greenhouses 2244
in Jack Pots 541
in jiffy and peat pots 541
in 'Pesmic bricks, 2245
plastic, bags, tubes etc 541, 543-4, 562, 2246, 3795-6, 3798-800, 5541, 5551-2, 5554, 5566
root collar diameter 3812
in wiremesh containers 3794
Planting stock— cont.
root development in container-grown 5553
root pruning 2224, 3800
root regenerating potential 1897, 2221
sales 5560
season of lifting 555
seedling vs. cuttings 326
seedling vs. transplant 555, 2250, 5561
size 2215, 2251, 3812, 5563, 5574, 5581, 5590
standards 552
storage, cold 554-6, 2257, 3777, 3817, p. 570 (U.S.A.)
storage in plastic bags 557, 2254, 3777
supplies 5560
transport 3798
treatment to
crack containers 3796
retard growth 3780
retard transpiration 560, 2253, 2263, 5567, 5669
treatment with
defoliants 2253
insecticides 1000, 6009
repellents 3817
wildings 2252
see also **Nursuries and nursery practice**
Plasticized wood 6483
Plastics
derived from wood 3054, 6729-31, 6738
other 6738
Plotless cruising see **Angle-count**
Ploughing 470, 472-3, 3723, 5569
disking 3672
effect on seedling development 3724
ridge ploughing 474
Ploughs see also **Cultivation**
design 469, 471, 5482
disk 469-71
'JLN-1' 474
mouldboard design 472-3
testing 5685
Plus trees see **Seed tree(s)**
Plywood
beams 1448, 6523
bond strength 4644
colour p. 783 (U.S.A.)
conference on 1424
defects p. 783 (U.S.A.)
bleedthrough 4649
detection 6665-6
elasticity effect of adhesives 1429
fatigue 6373
finishes 3033
gluing 4641
industry 4470, 6238-9
linear programming 6509
manual of 1425
manufacturing handbook 6507
marketing 6238
mechanical properties 1429, 4676-8
mills 4674
moisture content 6463
overlays 6494
presses, small 4650
production planning 4674
quality 6463
research 1425-6

Plywood—cont.
sanding 1410
sawing 3006
screwholding properties 2969
softwood 6238
standards 1428
strength 1428, 3045
stressed skin component 6522
surface repair 3033
testing 3022, 3045-6, 6368-9, 6510
timbers for 1427, 3042
uses in
flooring 1453
roofing panels 6511
yield 6477
see also **Glue joints, Glues and gluing, Laminated wood, Strength, Veneer**
Poisoning of trees 819, 3884
costs 621
for stand improvement 5636
in tropical forest 5442, 5635, 5637
methods of application
axe cuts 3883
frills 621
injection 2487, 5638-9
season 621
to encourage regeneration 5442
to prevent coppicing 3892
see also **Barking, chemical, Weed trees and shrubs, and Weed-killers**
Poisonous species 193, 1824, 1905, 2333, 3445-6
Poles 1417
decay 3064-7, 6593
design 6499
durability 3065
for building frames 4680
infection by kerosene fungus 5028
isotropy 6354
preservation 3066-7, 6558-9
protection, glass fabric jacket 6499
protection, plastic covering 6500
quality 2918
seasoning 1541, 3110, 6498
species for 5446
testing 6545
transmission 3064, 3110, 5446, 6499
twisting 1560-1
urethane-foam back-fill p. 569 (Canada)
use in vineyards 6500
working stresses 4680
see also **Preservation, Strength**
Policy see **Forest Policy and Geographical Index**
Pollarding and pollards 2350
Pollen 331, 333-4, 1863, 3390, 3392-8, 5337, 5339
atmospheric census 3249
chemical composition 156, 5115
development 5116-8
disease caused by 2358
dispersal 18, 1888, 3249, 4980
flight examinations 2026
distribution 3393
effect of
breeze drying 1873
ionizing radiation 156, 5150
temperature 3588, 5116-8
germination 155, 1871, 5119
hay-fever, cause of 4980
ice crystals in 1873
morphology 211, 3393-8
processing 174
Pollen—cont.
serological studies 1872, 1892
storage 174, 3436
Study methods 1863; p. 201 (Germany)
trapping 2026, 4979
viability 1863, 1873, 3588, 5116
see also **Palaeoecology, Phenology**
Pollination 3392, 5310
controlled 163, 1874-5, 1892, 3427-8, 5179
effect on seed production 3589, 3591
mechanism 1868, 5142
selfing, induced 5120
selfing, natural 164
techniques 165, 1874-5, 1892, 3427, 5149
use of
bees 3591
diluted pollen 167
Pollution, atmospheric see **Atmospheric pollution**
Pollution of Water
by herbicides 5797-8
by wood industries 3129
Polyploidy see **cytology**
Poplar growing 606, 2299, 3719, 3766, 3831-2, 3871, 5126, 5404-6, 5515, 5521, 5529, 5580, 5624, 6340
see also **Species Index s.v. Populus, and Geographical Index**
Posts
decay and stain 1539
durability 4702-3
mechanical installation 899
seasoning 1539, 1541
see also **Preservation**
Powder-post beetles see **Borers, wood**
Precipitation
intercepted
effect on evaporation and transpiration 3313, 5036
measurement 1779, 3312; p. 574 (India)
see also **Dendrochronology, Dew, Fog, Forest influences, Hail, Rain, Snow, Rime**
Predators of insect pests 1003, 1065, 2658, 4181, 4196, 4260, 5943, 6040
ants 908-9, 5051
attractants 4256
birds 910, 945, 1016, 1037, 4260, 5053, 5927-8, 5966, 5969
effect of gamma rays 2616
insects 932, 975, 986, 1002, 1011, 1016, 1022-3, 1037, 2607, 2623, 2629, 2634, 2670, 4183, 4220, 4256, 4279, 5969, 5995, 6003, 6013
response to prey density 5937, 5959, 5966
larval adaptation against 5982
mammals 5927, 5966
mites 1007, 4266
Preservation of
building timbers 1465, 1490, 4706, 6556
fence posts 4702
fibre board 6562
insulating boards 6562
laminated wood 1480
logs 6648
logs in the forest 1511, 2384, 5699
marine timber 6496, 6612
mine timber 6555, 6608
Preservation of—cont.
particle board 4820, 6562-3
plywood 6560-1
poles 1417, 1541, 3064-7, 4697, 6557-9
posts 1487, 1541, 3062-3, 4703-4
siding 6529
sleepers 1488, 4696, 4705, 6553
tropical timbers 6556
unbarked roundwood 5700
veneer 3061
wood used in greenhouses 4707
Preservation, wood 1462-90, 1504, 3055-67, 4692-707, 6539-63
after treatment 4705
against
bluestain 1465, 2384
borers 1465, 1477, 2383, 3055, 3061, 6561
insects 5700
marine borers 1489, 3096-7, 3099, 4744, 6496; p. 202 (New Zealand)
red streak 2383
rot fungi 1465
sap stain 4719
soft rot 4695
termites 1465, 1469, 3057, 4697, 6546, 6623
application
bandages 3067
brushing on 4706
cold soaking 1483, 1485
diffusion 1483
dipping 3060, 6555-6
double diffusion 4702
foam plastic 'plasters' 4705
hot- and cold-bath 1484, 3063
injection 3067
Lowry process 3056, 3058
pastes 4706
pressure 6551-3
sap displacement 3062, 6557
spraying 1486, 2383-4, 5699-700
to green wood 6552
vacuum/pressure 1473, 1482, 3059
vacuum-pressure diffusion 6554
assay of treated timber 6623
bibliography 1462-3
climatic considerations 6554
conferences 1464
dethiaminization 6550
dimensional changes 1476
distribution of preservatives 4696
duration of effect 1511
economics 1464
effect of
density 4701
m.c. of wood 3060, 6553
wood anatomy 4693
effect on
gluing 4698, 6560
strength properties 1476, 4698
international co-operation 6540
laboratory tests 4695
persistence of effects 1478, 4696, 6544
pretreatment
barking 2366
seasoning 1541
steaming 3059
research 1481
season 5700
specifications 4692
terminology 6539
textbook 4690

Preservative-treated wood
defects in 1490
effect on fruit 1479
marketing 1464
production trends 6541
seasoning 1481
use in cooperage 1480
see also **Improved wood**
Preservatives, wood 1466-89, 3055-67, 4692-707, 6542-63
ACP 4699
Antimögel 6560
As compounds 4697, 4702, 6496
Ascu 3062
Ascu 'A' 1518
A Zn P 4699
B-F-Cr-As complex 6546, 6556
BF salts 1534
BHC 5699
Boliden salts 1472, 4707, 6496
boron and boron compounds 3061, 6547
celcure 3062, 4707, 6555
coal tar 4695, 6496
coconut component 6612
corrosive effects 6563
Cr compounds 3055, 4702, 6496
Cr-Cu-As complex 1475, 1482, 3058, 4698, 4725, 4741, 6545, 6552
see also Boliden salts
Cr-Cu-B complex 6557
Cr-F-As complex 6557
creosote 1488, 2521, 6496, 6545, 6553, 6613
addition of As_2O_3 1469, 3057, 4697
ageing 4696, 6544
coal-tar vs. normal 3056
mixed with pulping waste liquors 6567
retention 6544
toxicity 4697, 6543
Cu compounds 1471, 1478, 3060, 3062, 4702, 4731, 4750, 6496
degradation by fungi 6601
detection 6548
determination in wood 1470, 6547-8
Dohnalit U 11 6648
F-Cr salts 4705
fixation 1484
fluorides 6563
H_3Bo_3 1483
Hg compounds 1503
insecticidal effect 6014
Kornikol 2384
Na F 1473, 3067
$NaNO_3$ 2521
naphthalenes 1478
naphthenates 1478
Na_2SiF_6 1473
NH_3 p. 202 (U.S.A.)
oil-based 1470, 1534, 4820
PCP 1478-9, 1483, 3060, 4706, 6529, 6562, 6601
PCP-Cu 6562
PCP-Na 4725, 5699, 6562, 6648
PCP-NH_4 Cu 4699
PCP-NH_4 Zn 4699
petroleum wax 1480
Romalit-N 1484
safety in use of 1464
Santobrite see PCP
survey of
commercial products 1466
Tanalith 1487, 3063; p. 202 (New Zealand)
Preservatives, wood—cont.
Tanalith 'C' 3064
Tanalith 'U' 3064
tar oil 1478
testing 1488, 1505, 4700, 4750, 6542, 6546, 6608
chemical 1470-1
graveyard tests 1468, 4723
leachability 1474-5
marine exposure 1489, 6613
penetration 1471, 1511
respirometer 4725
sapwood blocks 6544
standards 6623
toxicity 1473
thiocarbamates 6549
Timbor 6547
tin compounds 4700
toxicity to insects 4700
toxicity to plants 4707
U salts 6555
UA salts see also Tanalith, Wolmanite
use trends 6541
vegetable tannins 1480
water-borne 6613
water repellent 1467, 6529
Wolman salts 1487
Wolmanit CB 1477
Xylamon 1486, 3099, 6648
Xylophene 3099
Zn compounds 4702, 6549
Prices 6226-7
in mountain forests 1172
logs 6227
relation to log size 4433
trends 4445, 6227
zonal system 6226
Primary conversion see **Barking, Chipping, Crosscutting, Logging &c.**
Prism see **Angle-count, Diameter measurement**
Private forestry 3209
administration 6215
consultants 4425
costs and prices 2823, 4425, 4444, 4446
survey 4444
finance 3928
management 2818, 4444, 5058, 6823-4
promotion organizations p. 782 (Finland)
statistics 4446
tree farms 3214
see also **Co-operation, Farm woodlands, and Geographical Index**
Producer-gas
for logging vehicles 1621
gasification plant 1621
Production, biological see **Dry-matter production**
Productivity of plant communities 5250-1, 5275, 5329
Profitability 1190, 2838, 6192, 6194
Progeny trials see **Breeding**
Propaganda 6830; p. 201 (France)
Propagation, vegetative 524-40, 2024, 2225-42, 3781-93, 5540-49
age of parent tree 2225
budding 5549
certification of material 5478
conference 524
cuttings 2226-8, 3757, 3784-5, 3787, 3789, 5542, 5545
Propagation, vegetative—cont.
bamboos 3786
clonal variations 524, 3790
costs 3781
diseases 531-2
effect of
age of parent tree 2233, 5541
depth of planting 2233
disbudding parent tree 5541
fertilizing 2211, 3783
light intensity 530
moisture conditions 2232, 3788
rooting media 530
temperature 530, 2232-3, 3788
from epicormics 529
from suckers of cuttings 5543
hydroponic culture 524
in cold frames 3788
in greenhouse 5546
insect pests of stool beds 5949
lignified 2231
machine for preparation 5515
mist propagation 524, 2228, 2230, 3788
of adult material 5544
of juvenile material 5544
root 531, 3757
rooting capacity 524, 2230, 5114, 5540, 5545-6
rooting media 524, 3769
season of collection 527
seasonal rooting response 5540, 5546
soaking 524
storage - short term 528
treatment to prevent wilting etc. 528
genetic control 2228
grafting 533, 537, 539, 1876, 2234-5, 2241, 3757, 5549
anatomy of union 2240
cleft 533, 5547
clonal variations 3790
C/N ratio of scions 534
CO_2 exchange 3372
collection and storage of scions 534, 2239
diseases 532
effect of cambial contact length 3791
effect of fertilizing seedling stock 3793
effect of girdling scion branches 3793
effect of growth substances 540
effect of topophysics 2237
flowering 2242
fruiting 2236
in greenhouse 534
in greenhouse vs. field 5547
in the open 533-4
incompatability 535, 3792, 5548
intergeneric 524, 533
interspecific 524, 533-4
nurse seed grafting 2238
plastic tubes 545
position on stocks 535
scion in contact with soil 535
season 540
seed orchards 2242, 5500
side 538, 3793
spliced side 533
stock/scion effects 534, 536, 2180, 3757, 3793
use in virus studies 882-3

Propagation, vegetative—cont.
use of polythene bags 534
use in tree breeding 534, 2180
layering 524, 5305-6
marcottage see air layering
mist propagation 3784-5
needle-bundles 526, 2229, 3404
root cuttings 1896
effect of hormone fungicide combinations 3782
season 5549
suckers 308, 2025, 5127
use in tree breeding 534, 2180
see also **Coppicing, Growth regulating substances, and Species Index**
Protection, forest and plantation 754-1077, 2420-2686, 3995-4295, 4394, 5754-6071
appraisal of damage 3995
appraisal of resistance status 3995
chemical control
see also **Fungicides, Insecticides, Weedkillers**
damage from browsing 3664
economics of 3996
see also **Diseases of trees, Fire, Fungus diseases, Insect pests, Quarantine regulations &c.**
Protection forests 390, 3989, 3995, 4915, 6803
see also Shelterbelts
Provenance 446-59, 2158-69, 3708-16, 5469-76
altitudinal 459, 2051, 2195, 3412, 3418, 3712
and
afforestation 3834
bark thickness 4303
chemical constitution 162
disease resistance 172, 832
drought resistance 150, 175
flowering 3421
frost hardiness 162, 453, 1883, 3417, 3522
germination 1878
insect attack resistance 157, 4209
leaf variation 160-2
N metabolism 1885
nutrient uptake 3440
photoperiod 1952
photosynthesis 5165
phototropism 159
reproductive behaviour 3422
resistance to snow breakage 3728
response to Ca concentration 3402
rust resistance 2536
seed abnormality 3754
seed quality 2195
seed weight 5476
seedling development 1878, 1885, 2168, 3417, 3711
stratification requirements 5509
transpiration 459
turpentine chemistry 6760
wood anatomy 3415
wood chemistry 1603
wood density 453, 3415
wood properties 5175
yield 453
certified 5503
early tests 3424
interaction with environment 3417
phenological differences 456, 1893, 3418, 3420, 3422

Provenance—cont.
research, need for 5469
trials 172, 175, 448, 450-6, 459, 1883, 1885, 1891, 1893, 2159-68, 3413, 3416, 3419, 3423-4, 3698-702, 3708, 3712-6, 3718, 3728, 4303, 5169, 5470-3, 5475-6
age for evaluation 1880, 3412, 3710, 5474
controlled environment 3402
lay-out etc. 446-7, 2158
variability within 3728
zones for seed collection 3716
see also **Races, and Species Index**
Pruning 633-6, 2318-22, 3885-91, 5640-4
brashing
mechanised 633
bud pruning 3888, 5644
costs 633, 2318
economics of 2319, 3886-7, 4671, 6202
use of models 3122
effect on
epicormics 636, 3889
fungal entry 851
heartwood formation 5641
increment 635, 2350, 2756, 3866, 3889, 5642-3
insect pests 1001
quality 2315, 6202
taper 5642
stem form 635, 2320
timber grade recovery 3122
wood properties 5643
mechanization 3890
natural 323, 2052
of
roadside trees 3891
root see **Nursery practice**
selection of trees for 634
timing 5643
tools 635, 2318, 3891
'Tree-Monkey' 635, 2318, 3890
use of 'prunings' 2322
work study 5640, 5643
wounds 2321, 5643
see also **Wound(s) and Species Index**
Pulp
bamboo 4799
bleaching 6700-1
chemigroundwood 1569
effect of
chip storage 3119-20
extractives 4792
fibre properties 1612, 2895, 3135, 4788, 4795, 6674-6
latewood % 6680
silvicultural treatment 4602
wood density 1572, 4795, 6681
wood structure 6283, 6681
from blue-stained wood 6698
from mixed hardwoods 3136
fungi 1585
groundwood see mechanical
Kraft see sulphate
marketing 6689
mechanical 1569, 3139, 4441, 4791, 6679-80, 6689, 6700
microscopic analysis 3132
NSSC 3139, 6701
sulphate 3139, 4793, 4798, 4804, 6675-6, 6684, 6693
yields 3095, 4441
Pulp and paper industry 1414, 1572, 4460, 6242, 6677

Pulp and paper industry—cont.
associations p. 379 (Sweden)
conferences 3137
costing 1571, 5734
economics 4462, 4472
establishment 2855
integration 2854
materials other than wood 1570-1
plant location and pulp-wood supply 2856
research 6695, 6697
statistics 3133, 4462, 4473-4, 6244
suitable species 436, 1570-1, 1576, 1578-9, 2895, 3134, 3136, 4793, 4797-8, 4800-1, 4804, 4807, 6682-5, 6687, 6689, 6691-2, 6696-8; p. 379 (Rome)
Pulping 4794
bamboo 1583-4, 4799, 6686
bisulphite 6283, 6692, 6695, 6697
bleaching 1574, 1584
calcium base acid-bisulphite 6697
chemical 1582
chemical changes during 6405
chip-refiner process 6677
conifers in tropics 6683
delamination of fibre wall 2886-7
delignification 1321-2, 6699
groundwood see mechanical
hardwood shrubs 4804
hardwoods 1579, 1581-2, 3135, 3137, 3139, 4792, 4806, 6232, 6675, 6687, 6701
mixed 1574, 4802, 6688
tropical 1577, 4807, 6626, 6690, 6693
hardwoods and softwoods mixed 3147
impregnated billets 4791
Kraft see sulphate
Magnefite process 1575, 6698
mechanical 1569, 1574, 1582, 4790-1, 6680, 6700
nitric acid 1574, 6701
NSSC 4806-7, 6701
physical changes during 6405
prehydrolysis 1578, 4805, 6693
sawdust p. 570 (U.S.A.)
semichemical 1569, 1582
small wood 1580
soda 4806
softwood 3139
sulphate 1321-2, 1337-8, 1577-80, 1583-4, 2937, 3141, 4793-4, 4796-7, 4802-3, 4805-7, 6283, 6675, 6684-6, 6688-91, 6694, 6698
tall oil 3141
sulphite 1321, 6694, 6696
wastes 1337-8
waste wood 3135, 3139, 6232, 6679, 6699
see also **Chippers, Waste liquors**
Pulpwood 6114, 6469-70
barking 1109-10, 6117
in mill vs. forest 6209
breeding for 1870
chips 4673
crane lengths 6209
cross cutting 5705
in mill vs. forest 6209
demand 4460
economics of 4462
handling 3933, 6119

Pulpwood— cont.
harvesting 691, 1404, 1804, 2367, 3130, 4403, 4439, 5734, 6209
harvesting areas 6845
chipping vs. slashing 3130
marketing 4462
measurement 1106, 1109-10, 2730, 6119
stacked volume vs. solid 2735, 6117, 6123-4
stacked volume vs. weight 1106, 4337, 4439
minimum diameter 2387
moisture content
determination of 1106
optimum length 2388, 4332, 4439
plantations 1570, 3682, 3828, 4789
preparation 1109-10
production
on strip mined land 3840
production costs 2387-8, 5734
properties 4789, 4798, 5180
variation with position in tree 4797
quality 4800
resources 4460
selling by weight 1107, 2730, 6119
sizes 4441
small trees 6678
softwood mixtures 4790
stands 2758, 5583
statistics 6244
storage 1515-6, 6698
chips vs. logs 3119
of chips 6651
thinnings vs. mature wood 4797
transport 3130, 3933, 5722
see also **Pulping, and Geographical and Species Indexes**
Punched cards see **Card sorting methods**
Pure crops see also **Conversion**
Pyrolysis see **Distillation, destructive**

Quality index
of stand 6113
Quarantine regulations 2421, 3102, 3997-8

Rabbits and hares 76
see also **Myxomatosis, Rodents**
Races
altitudinal 150
ecological 182
edaphic 173
geographical 173, 187
genetic evaluation 5169
latitudinal 184
morphological 3410, 5169
physiological 5169
response to environment 173
see also **Provenance**
Radiation, ionizing
absorption by wood 4532
damage and gibberellins 5770
effect on
apical cells 4026
Co_2 exchange 5775
cuttings 775
decay in wood 1509
dormancy 4027
ecosystem 2441, 4030, 5769
forest mosses 776
Radiation, ionizing— cont.
genetic constitution 4029
insects 2616, 2650 4030
moisture content 4027
plants and soils 3402
pollen 156, 5150
reproductive behaviour 2441
seed germination 2442, 4027-8
seedlings 2442, 4028, 5774-5
water stress 774
wood 4713, 6291-2, 6304
electron-radiation 4713
fast neutrons 4027
fibreboard properties determination 6723
forestry and agricultural applications 4972
fossil resin, study of 1644
fungus and insect control 3090
increment cores examination 2767
measurement of 85
resin, study of 1644
seed testing 2194
seed treatment 5777-3
sensitivity, specific differences 4025
surface coating 4713
tree breeding 156, 5150
wood polymerization 3068-71, 4713, 6562, 6571
wood research 2860, 2976-7, 4481, 4519-20, 4579
Radiation, solar see **Light, Temperature**
Radio-active carbon dating 6056
Radioactive isotopes
applications, general 4972
distribution in plants 3349
use in forestry research 3855
use in study of
fertilizing 3855
lignification 1318
N mineralisation of humus 596, 3854
P distribution 1844
root systems 3573
sap flow 1842
translocation 1843, 2285, 3347, 5089, 5093-5
Radioactive pollution from fall-out 84, 4028, 5095
Radioactivity of trees, natural 83-5
Rafts see **Floating and rafting**
Railways
construction 737
locomotives 3975
rolling stock 3975
Rain
chemical composition 34, 1762-3, 1974
effect of wind and topography 2074
erosion index 3318
interception 60-1, 1762-3, 1778-82, 2074, 3312, 5034, 5354
landslides caused by 5043
stem-flow 34, 60, 1762-3, 1778-9, 1782, 1974, 3312, 5034, 5361
see also **Precipitation**
Rain forest
animal ecology 3633
increment 2759
management 3657
silviculture 3657
soil fauna 3633
structure 2759
see also **Vegetation types**
Range management see **Grazing and pasture**
Range, natural see **Distribution**
Rat damage see **Rodents**
Rattans see also **Canes**
Reaction wood 1506
anatomy and ultrastructure 1251, 4518, 4522, 6284, 6286-7
cellulose 4520
chemistry of 1248, 6286-7
compression wood 1248, 1894, 4517-8, 6285-6, 6660, 6674
relation to knots 5161
effect of growth substances 2906
factors affecting incidence 4608
fibres, gelatinons 4522
histochemistry 6288
induced by snow bending 4010
induced formation 4516, 6289
relation to
'anisotropy' 4608
bole straightness 1894
lean 4608
review of literature 6285
technique of study 4517
tension wood 1249, 1250-1, 4521-2
distribution in stem 1250
machining 6659
Recreation, use of forest for 431, 1682-94, 1699, 2831, 3200-12, 4909-20, 6803-14, 6816
access to 1690
effect on soil and moisture 3261
evaluation 2831, 4916-8
in tropical forests 3202
relation to nature conservative 3201, 4911
research 3200, 3205
subsidies to forest owners 1690
Recruitment period (Temps de passage) 6161
Regeneration 339, 401-608, 1685, 2121-299, 3665-871, 5429-624
artificial vs. natural 399, 2121, 5432
machinery for 3665
see also **Site preparation**
Regeneration, artificial 419, 5407, 5441, 5443-4, 5466, 5558
on raw humus 3537
planting vs. direct sowing 406, 3807, 4259, 5432, 5480, 5555-6, 5590
see also **Afforestation, Nursery practice, Planting, Sowing, direct and Species and Geographical Indexes**
Regeneration, natural 339, 401-18, 2122-34, 3666-78, 5429-42
after clear felling 3321
by
advance growth 394, 403-4, 2125, 2133, 2597, 4289, 5375, 5434-5, 5437, 5439-40
coppicing 416-7, 2023, 3582, 4912, 5440-1
groups 20
layering 306, 5440
suckering 307-8, 416, 418, 2025, 3597, 5441
climatic factors 386, 407-8
distribution 5242, 5312
ecological effects 3658
economics of 3673
effect of
birds 407

Regeneration, natural—cont.
browsing 896, 3664, 3901
cone rust 880
crown cover 408, 2042, 3675, 5439, 5442
environment 308
excessive moisture 386
felling intensity 395
fire 966, 2010, 2129
flooding 3676
frost 314, 386
game 402
grazing 3676
ground vegetation 386, 2042, 3671
liming 402
litter 314, 408
logging methods 395, 3669, 5434-5
microclimate 2042
rodents 889, 2580
seedbed conditions 402, 408
silvicultural system 3671
site deterioration 386
size & shape of opening 20, 394, 5433
slash disposal 3669
soil 386
soil moisture 314
understorey 3677
wind 402, 5433
from slash–borne cones 409
history of 3658
in
insect-killed stands 966
mixed stands 337, 415, 2122, 2127, 2132-3
selection forests 5430
shelterwood 5430
subantarctic forest 5413
insect pests 2597
light requirements 20, 5442
relation to humus type 2041
seedling vs. coppice 416, 3678
site preparation 3670-2, 3677, 5412, 5434, 5436
suppression 1975
see also **Competition, Light, Site preparation, Seed trees and Species Index**
Regeneration surveys 5610
Relascopes 1084, 4309
see also **Angle-count**
Release
fellings 619, 3669
response to 619, 2315, 3669, 5439, 5442, 5652
see also **Poisoning of trees**
Relict stands 72, 2083, 5367
Rent 1179
Repellents
addition of adhesives 5918
against
birds 3748
deer 5917
mammals 886
rodents 496, 2584, 3751, 3817
Captan-Sow 3751
systemic 887
tetramine 887
TMTD 3817
toxicity to seeds 3751
treatment of planting stock 3817
Waxoline dyes 3748
Z.I.P. 2584
$ZnSo_4$ 2584
Reproductive behaviour 306-17, 2019-49, 3422, 3582-93, 5305-18
Research institutes, programmes &c. 2688, 3228-30, 3650, 4943-7, 4949-52, 4957, 4968-71, 5145, 6248, 6837-43; p. 378 (Canada); p. 783 (Switzerland)
see also **Flowering, Genetics, Pollen, Propagation, Regeneration, Seed, Sex, and Species Index**
Reservoirs 6820
Resin(s) and Oleoresins 1644-8, 3171-3, 4843, 6758-60
balsam 1646
chemistry 657, 1336, 1398, 1645, 1648, 2983
content of wood 3141
distribution in tree 5093, 5105
effect in acoustic properties 4534
effect on elasticity 4534
effect on insect pests 2668, 3917, 5935 6022
effect on pulping 1343
effect on tall oil yield 3141
extraction from stumpwood 1620
exudation pressure 5106
formation and secretion 3379, 5105
fossilized 1644
industry based on 6242
in tropical species 657
of hybrids 2983
storage 1343
uses 1646, 3172
see also **Rosin, Turpentine**
Resin-tapping 652-7, 2334-48, 3911-8, 5659-67
assessing productivity of trees 652, 5168, 5660
barrel emptying device 6758
breeding for 5168
effect of season 5661
effect of tapping method 5661
effect on
health of tree 2346, 5663
increment 5663
resin ducts in needles 5132
tree physiology 653
wood properties 2347, 5663, 5667
faces
completely barked 3912
face-girth ratio 2340
grooved streak 3913
half-barked 3915
interfaces 2342
'reduction cut' 3913
two/three storey 2337-8, 2341
wide 5662
organization 655
research 2336, 2338-9, 2343-4
resin content of tapped trees 2348, 3916
resin content of untapped trees 3916
selection of high-yielding trees 5168, 5660
stimulation of flow by chemicals 2343, 3911, 3913, 3918
bleaching powder 5662-3, 5666
effect on
mechanism of resin flow 5665
quality of rosin and turpentine 656
total yield 656
Resin-tapping—cont.
H_2SO_4 656, 2342, 2345-7, 5662, 5664-5
lignosulphonate wastes 2344
paste vs. spray 3918
to induce resinosis 2348
tools 2234-5, 5666
work study 3914
yields 2338-9, 5659
effect of climatic factors 654
relation to provenance 3911
Resinosis 4261
Resonance wood 1266, 1543, 4534
Respiration
clonal variation 186
effect of
environment 104
light intensity 186, 1847, 5164
temperature 1846, 3296
weedkillers 804
electron transport train 100
inhibitors of 96
measurement 102, 2739
of branches and stems 5099
of cambium 1845
of leaves 1847
of ground flora 5100
of roots 1846
of seedlings 5162
of stem 5092
rate 1845
relation to
photosynthesis 5163
provenance 184, 5163
surface area of stem wood and bark 2739
seasonal variation 3366
Review of Applied Mycology vols. 1-40 5812
Rhizometer, photoelectric 3565-6
Rhizosphere 5091, 5273
bacteria 1984, 1996
biological activity in 37
Rime 5035
Rings, growth
analysis 766, 2767, 2769-70, 6155, 6293
anistropy 4608
correlation of width with
age of tree 4385
cambial differentiation 1237, 4513
cell size 4513
climatic factors 63, 1126, 2768, 4385-6, 6157-8
core production 2768
density 6338-9
fungus diseases 4102
previous years growth 2768
rainfall 63, 1963
solar activity 1125
water deficits 1963
wood properties 1306
effect of
atmospheric pollution 766
volcanic eruptions 2772
false 4386
formation 4523
index series 2769-70
measurement p. 378 (Canada)
relation to compression strength 6366
relation to crown class 6294
relation to crown development 4606

Rings, growth—cont.
study methods 1116
tropical species 1116, 4366
twenty two year rhythm 1125
variation in
cell size 1237, 6294
cell wall thickness 6294
transition to late wood 6294
variation within single ring 6073, 6293, 6295
variation within tree 1306
see also **Dendrochronology, Early and late wood, Increment borings**
Riverside forests 1688
Roads and road building 737-52, 1193-4, 2414-6, 2840-1, 3989-92, 4450, 5689, 5750-1, 6216-8
angles of spur and branch roads 1193
bridge construction 5684
checking grade line 738
concrete 742-3
concrete strips 741
co-operation 1705
costs 3990
distribution between forest owners 1705
military training 739
drainage 2416, 2418, 4686
earth moving 738, 3990
economics 1194, 4429
effect of logging methods 6218
equipment 663, 743-5, 750, 3990, 5684
gravel 3991
layout and planning 738, 1193, 4429, 5684, 6216-7, 6777
aerial photos 1151
computers 4322
linear programming 2415
mathematical techniques 4322
maintenance 750, 6217
manual of forest roads 2414
on bogs 740-1
on slopes 2400, 2416
optimum density of network 2400, 2840-1, 4429, 4450, 6216, 6218
relation to maximum vehicle load 1194
stabilized earth 745-6, 748-9, 3991, 5751
surfaces 750
survey instruments 4322
use of hygroscopic salts 3991
use of lime 749
work studies 742, 5750
Roadside plantations 3895, 5596
erosion control 2325
injured by salt 4014, 5764; p. 570 (U.S.A.)
see also **Ornamental trees, Street trees**
Rodents 888-91, 2578, 2580-4, 4162-8, 5911-5
consumption of seed 5915
damage study 4165
damage to preservative treated wood 1534
damage to trees 2582-3, 5914
effect of fertilizing 2581
effect on natural regeneration 2580
poison baiting 5915
relation to 'natural' cuttings 306
repellents 2584, 4164
see also **Mice and voles, Rabbits and hares, Squirrels**
Roofs and roofing 6524-26
Root and butt rots 840, 846, 850, 2514-22, 4083, 4098-120, 5834-50
control 2520
chemical 4100
detection 4727
distribution 2516, 4110
effect of host vigour 5837
effect of wounding 4101
effect on extractives 5848
effect on increment 4115
relation to burning 4117
systematic and taxonomic studies 4114
Root(s)
absorption of water by 295, 5301
adventitious 300, 1999, 3821
anatomy 3575
chemical constituents 3377, 4582, 4838, 6747
competition 301, 3579, 5301
culture of 282, 3558
diseases 850, 2515, 2520, 2526-7, 4119, 5821, 5833, 5845, 5847
in nurseries 5825
relation to mycorrhiza 2502
research 2513
rots see **Root and butt rots**
distribution 299, 2099, 3571
dormant bud on 3583
effect of drought 299
effect of mechanized tending 518
excretions 2017, 2518, 4086, 5280, 5090,
fungal association with 283,
fungi 5822
grafts 296, 3573, 5298
growth 294
effect of
barriers 2008
crown class 298
environment 5295
fertilizing 281, 3783, 5296
growth substances 121
heredity 5295
light intensity 3521
nematodes 1070
repellents 2584
soil properties 2000-1, 2004, 5299
tropism 2008
in sandy soils 5299
initiation 2003
negative geotropic 6810
phenology 116, 2003, 3567, 3572
rate 3567
injury from insecticides 5929
insect pests 5949
measurement of surface area 3565-6
morphology 280
nodules 267, 280-2, 1997, 3555, 5286
mycorrhizal 285, 1995
O diffusion from 5091
penetration 299, 1961
pruning 2223-4, 5565
effect on flowering 3402
effect on height increment 5565
regeneration potential 3572
respiration 1846, 3297, 3778
rhizosphere see **Rhizosphere**
root/shoot ratio 297, 1141, 1897, 2007, 3375, 3521
study methods 280, 294, 297, 3565, 3573
Root(s)—cont.
suckering 3583
suppressed buds 5127
systems 2005, 5262, 5292
classification 290
development 291-2, 1998, 5292, 5564
effect of
cultivation 5299
drainage 3851
flooding 6810
effect on wind throw 4001
in
arid zones 4947
"biogroups" 3569
mangrove swamp 3575
mixed stands 3569
sandy soils 1998
shallow soil 293
wet soil 293
of
desert species 5293
ground flora 293, 3615
herbaceous weeds 4054
shrubs 2099
tropical species 3574
relation to
disease 2515
nutrient uptake 3568
soil type 291, 3568, 3570-1, 5292, 5294
stand type 5292
windthrow 2009
water table 3568
temperature 1846
volume 6092
weight 5299
see also, **Mycorrhiza, Propagation, vegetative, Rhizosphere**
Rosin 4827
analysis 6759
effect on metals 3153
Rot fungi 1504-21, 3081-95, 4721-41, 6584-609
associated with bacteria 4097
benzoic-acid degradation 6602
biochemical studies 1521, 1585
biological control 3066
biological studies 4723
biology, manual of 4721
breakdown of cell wall by 3083
cellulolytic 1585
changes produced in wood by 1518
CO_2 evolution 4725-6
colorimetric tests 4730
culture and culture technique 3081, 3093, 4722, 4736
distribution 2523
effect of
O and CO_2 pressure 4729
wood extractives 4593
enzymes 3081, 4730-1, 4733, 6606-7
hyphae penetration of cell walls 4734
identification 1518
in soil 4724
in wood pulp 1585
infection of poles 4724
interactions 1515, 3091, 6600
light requirements 3088
lignin degradation 6595
ligninolytic 3081, 3093, 4736, 6607
measurement of growth in wood 4725-6

Rot fungi—cont.
metabolism 2517, 6602-6
microscopy 6581
nutrient requirements 1521, 6605-6
physiology 6606
relation to soil properties 4724
taxonomic study 4104, 4111
temperature relations 3089
test species 4740
toxins produced by 2577
see also **Decay**
Rotations 4373, 4417, 4908, 5578
computation 1159
financial 1180-1, 2812, 4427, 6178, 6197-8
fuelwood 1138
in relation to labour intensity 4431
maximum volume production 1159-60, 2803, 6073, 6178
Poplar growing 2758
physical 6178
pulpwood 2758
relation to site quality 1160
technical 6073, 6178-9
theory of 1159, 2809, 4427
Royalty see **Stumpage**
Run-off
effect of
clear felling 3321
removal of humus 3321
discharge rates and water quality 1788
historical records 63
sub-surface 1789
see also Infiltration, Forest influences
Rust diseases 860-73, 878, 2500, 2508-28, 2575, 3454, 4130-43, 4149-52, 5862-88
cone 880, 5902
control 870
antibiotics 5878, 5884-5
biological 5883
chemical 864, 4143
silvicultural 2539, 6184
distribution 4140
growth rate 869
host-alternation 862-3, 2540, 2542, 2565, 4153
identification 5874
infection 2536, 5880
leaf 2553, 5887
life cycles 2553
resistance 172, 868, 2535-6, 2541, 4139, 4151, 5880
stem 866
treatment by tree surgery 5879
see also **Canker**

Safety 5676
regulations 3927
see also **Accidents**
Salt 5273
injury 759, 4013-4, 5764; p. 570 (U.S.A.)
tolerance to 263-4, 3545
Sample-plot technique 2304, 4395, 6076, 6112
programmes for data evaluation 2721
variable size plots 2777, 6112
Sampling 2769, 6105
assessing error 2801
for increment calculation 4380
Sampling—cont.
for nutrient uptake studies 2279
for tariff number 2716
for timber testing 4482
pest populations 1072
plot-size 2777, 2779
point sampling 2695
sequential 2540
simulator 4326
single-tree 2279, 2727
whole tree components 6114
see also **Enumeration surveys, Insect pests, Surveys, forest, &c**
Sanding 1410, 3031-2, 4661-2, 6486-7
see also **Finishes, wood**
Sandwich see **Laminates**
Sand(s), including dunes
fixation 637, 3842-3 5591, 5651, 6817
mulching 3843
natural colonization 344
see also **Afforestation**
Sap
chemical constituents 115, 5362
flow, measurement of 108, 1835, 1842
tapping 5669
see also **Sugar, Maple**
Sapwood cf. Heartwood
Savanna
economic development 6851
forestry boundary 347-8,
yield 4376
see also **Vegetation types**
Sawdust
cleaning 3131
composting 1461
hydrolysis 1619
particle board 1604-7, 6712
pulping p. 570 (U.S.A.)
uses, horticulture 3170
uses, potential p. 378 (Finland)
Sawing, theoretical studies 3010
Sawmilling 1207
accuracy 1378, 1382, 1385, 6424, 6431
bibliography 6495
breakdown optimum methods 1421
conversion factors 4673
conversion of smallwood 4653
costing 1403, 4670
cross-cutting 6431
automation 4653
cutting force 4620
dimensions produced 1377, 4672
economics 1188, 1378, 1421, 1423, 3036-7, 4618, 4653, 4670, 6234-5
edging 3040-1
effect of
log size 1188, 1377, 3037, 4618, 4670, 6234-5, 6432
pruning 3122
sawkerf 3037
feed speeds 1378, 1382
flat sawing vs. quarter sawing 4671
frozen timber 1379, 1385
historical review 1207
grade recovery 1377, 3036, 3039, 4617, 4671
linear programming 6503
log breakdown methods 6422
log supplies 6237
manual 669
mill studies 3036, 4671, 6506
organization of operation 4617
output 6505
Sawmilling—cont.
overrun 3037, 4671
plywood 3006
quality control 3001
rationalization 4669
recovery 1423
re-sawing 1387
research 3008, 3122
Rutto method 4686
small logs 1403, 6505
taper sawing 1387
television, using closed circuit p. 570 (U.S.A.)
use of band vs. frame saws 3038
use of frame saws 3036
work studies 6432, 6502
see also **Sawmills, Saws, milling, Wood-working**
Sawmills
automation 3035
band mills 3035
chipper head rigs 6505
costing 6233
history 3177
'log-gang' mills 6505
log separation 4777
oil vs. wood fuel 4469
production prediction 6504
'scrag' mills 6505
timber conveying, sorting etc. 4777
use of computers 3037, 6504
Saws, logging
cross-cut 3954
power
accessories 5685, 5709
accident prevention 5709
attachments 5707
chain 697-8, 2392, 3948-9, 3952-3 3955-7, 3959-63, 3965, 5685, 5691, 5705-8
circular 3965
specifications 2392
use for
cross-cutting 697, 3956, 3964-5, 5705
felling 663, 3959-64, 5691
thinning 3957, 3959-60, 3962
trimming 3959, 5691
vibration and noise 698, 2393, 3950-1, 5685, 5708
vs. hand 3926
work studies 3926, 3956, 3959-60, 3962-4, 5685
teeth angle, shape etc. 3952-4, 5706
work studies 3942-4, 3954
Saws, milling 1377-88, 2998-3011, 4617-27, 6422-33
automation 1422
band 4618
double bandsaw 4624
electronic blade tester 3011
feed speed 1385, 4624-5
kinematic relationship 4625
out turn 3038
production rate 6432
quality control 3001
setting 3009
swaging 1385, 3009
tensioning 4626
tooth design 3009
vertical 4624
chain 3949
chipping and sawing simultaneously 1403, 4654
circular 1383, 4616

Saws, milling—cont.
blade temperature 1384, 3004-5, 4621-2 6425
ceramic teeth 3007
cutting force 1383
noise 6426
portable 3949
rigidity 3003
riving knife 4623
sharpening 6430
stability 3003
taper ground 1387
tensioning 4621
tooth wear 1383
vibration 3002, 6426
with enlarged gullets 6427-8
frame 4618, 6422
blade thickness 6424
blade, stability of 1380
blades, concave 3000
blades, pre-stressing 1380
constant 'kerf' thickness 6423
cutting force 1379
feed speed 1379, 1382, 2999, 6424
guides 3000
optimum cutting conditions 6423
out turn 3038
quality control 3001
saw packing 3000
setting of teeth 6423
tensioning 3000, 4619
vibration control 1381
grade recovery 1421
RUHO 6433
safety regulations 2359
tooth
design and number 1379, 6429
hardening 1388, 2994, 6429
inserted-tooth 4616
sharpening 2994
wear, measurement of 2998
tubular 4686, 6433
Scaling
see **Timber measurement**
Screw-holding properties of wood 6374
particle board 2969
plywood 2969
Seasonal variation see **Phenology**
Seasoning 1537-47, 3107-15, 4753-75, 6628-45
accelerated methods 6643
air 1535, 1539, 3108-9, 4765
air vs. forced air 6630
bibliography 4754, 6628
checking 1542
conditioning 6645
clay no adsorptive medium 6642
defects 6668-9
degrade 1539, 6636, 6667
dielectric heating 4764, 4771, 6641
distortion 1287
drum type driers 4775
economics of 6667
effect of
bolt length 4755
hot N 3105
prefreezing 4759
preservation treatment 1490
wind velocity 6629
effect on
acoustic properties 1543
creep of re-wetted wood
gluing 6462
physical properties 4769
strength 3112, 6632
Seasoning—cont.
wood properties 4765
equalizing m.c. of wood 6645
forced-air 1535, 4757, 6636
gaseous reagents in 6538
grading timber for 6633
heated platens 3114
H.F. see dielectric heating
high temperature 3113, 4764-9, 6462. 6635
hot PEG 3072
infra-red 1546
insect control during 6620
kilns 1535, 1540, 4766-7, 6667
air flow studies 6638
automatic control 1544, 1547
compartment 6637-9
continuous charge 1544
continuous determination of m.c. 1547
dehumidification 1545
schedules 3111-2, 4763, 4768, 4770, 6631-2, 6634
solar 4758, 6640
tests 6633, 6638
thermal studies 6639
losses 6667
movement of moisture during 2945
nozzle driers 4773-4
of
chips 4775
fibreboard 1617
fireproofed wood 3074
poles 1540, 3110, 6498
posts 1539-40
preservative—treated wood 1481
rewetted wood 4761
stacked sawn wood 3109
thinnings 6669
veneer 4773-4, 6462, 6643
pre-drying 6635
pretreatment 3107, 3110, 4766-7, 4772
research 4760-1
shrinkage 4772
stresses 1286, 4763-4
superheated steam 4769
textbook 1537, 4753
time required 3108, 3113, 4761, 6636
warping 1285, 6669
see also **Steaming of wood**
Second-growth stands 3552
Seed 477-501, 2172-95, 3725-55, 5484-5514
abnormal 3754
aerodynamic characters 3735
certification 3728, 5503
chemistry 317, 1637, 2034, 2044-5, 5072, 6770
cleaning 3733
collection 5484
mechanical tree shaker 3732
season 483-4, 2033
zones 3730
colour 5140
costs 389
de-winging 485, 5484
dispersal 3589, 5310
by
birds 2039
oceanic currents 5246
termites 2072
wind 5490
Seed—cont.
distance 2038, 5311
dormancy 494, 2040, 2045, 5511, 5808
drying 3736
extraction 483, 3408, 5484, 5510
extractives, effect on insect pests 1643
germination 494, 2040, 5512, 5527
abnormal 135, 3754
biochemical changes during 316, 2047-8
cytology 2043
damaged seed 485
delayed 549
effect of
abnormal enbryos 3754
$AgNO_3$ 3744
growth substances 3746-7
heat 5263
$HgCl_2$ 3744
dehydration 5263
immersion in water 3741-2
leaf and root extracts 2013, 2016
light 5511
mineral content 317
photoperiod 2193
provenance 317
secondary drying 3736
seedbed conditions 314, 317
soaking 3592
soil moisture 312, 5314
soil sterilization 2200
space flight 5771
storage 2184, 3738, 5317
substratum 5316
succinic acid 3745
systematic insecticides 3753
vernalization 3741
weedkillers 805
inhibitors 305
light requirements 493, 5508, 5510
moisture requirements 486-95, 2187, 5317
of excised embryos 3592
on snow 5313
relation to
age of seed 2184
provenance 3444, 5509
seed weight & size 2184
temperature requirements 2042, 2187, 2193, 5317, 5508
testing 500, 2191
germinative capacity 2032, 2034, 3743, 5119, 5310
germinative energy 5310
grading 5484
handling 2196
international exchange 5502
manual 3725
microflora 2504
moisture
changes in 315
determination 499
morphology 206, 1865, 1915, 5144, 5224
oils 4844, 6766, 6769
pests
birds 885
insects 917, 1060, 4284, 5504, 5934, 6007, 6057
mammals 885
rodents 409, 889, 5915

Seed—cont.
production 477, 3585, 5308, 5402, 6781
age of onset 5310
assessment of crops 311
breeding for 167
clonal variation 5493
costs 5485, 5494
effect of
altitude 3586, 5485
artificial pollination 3591
fertilizing 478, 2177, 3589
fire 311
latitude 3589, 5485
pollination by bees 3591
selfing 164, 3591
stand density 3568, 5489
storage on slash-borne cones 409
effect on increment 4378
forecasting 5486
heritability 171
mixed stand 5489
of hybrids 163
on grafts 2179
periodicity 311, 3584, 3587, 4378, 5310, 5493
precocious 3422
registered stands 2172-3
relation to geographic range 35 1, 3587
quality 2179, 3408, 3589, 5514
sorting by sp.gr. 3734
utilization value 5514
variation with provenance 2195, 5484
relation to pollen viability 3588
ripening 2033, 3585
season 5310
temperature requirements 2032
sampling 498
size see weight and size
sorting 3733-4
storage 486, 2183, 3735, 5144, 5484, 5505-6, 5773
in liquid N 3738
in sealed containers 2184-5
in the berry 5508
long term 2184-5
moisture content 487-8, 2185, 5507
refrigeration 3736
simulation 3737
temperature 487, 2184-5
under snow 2188
vacuum-freeze drying 3737
supply 3730
testing 498, 2193, 3755, 5484, 5506
cutting 2191
flotation 2191
mould prevention 3755
ocular vs. laboratory assessment 2190
procedures 498
quick method 2192
research in 501
standardization 501
tetrazolium 5505
X-ray 3754
see also **germination**
treatment 3743, 3749, 3773, 5144, 5527, 5826
$AgNO_3$ 3744
alternating temperatures 5508
boiling 5512
Seed—cont.
dry heat 5512
dyes 3748
fumigation 5504
fungicidal 2181-2, 3750-2, 5513
growth substances 2186, 5511
H_3BO_3 492
H_2O_2 492, 3740, 5512-3
H_2SO_4 5512
$HgCl_2$ 3744
high temperature 2187
hygroscopic powders 495
insecticidal 497, 5504
pericarp removal 492, 496
pre-chilling 3739, 5508
radiation, ionizing 2189, 2194, 4027, 5772-3
repellents 496, 3248, 3751
scarification etc. 5512
soaking 490-2, 5513
stratification 489, 493-4, 542, 2188, 3739-40, 3742, 5509, 5510
succinic acid 3745
trace elements 2186
ultra-violet radiation 3755
weight and size 144, 5140, 5514
effect on seedling development 3740, 3775, 5316
relation to
germinative capacity 5316
provenance 3444, 5501
yield 5158
see also **Cones**
Seed orchards 480-1, 2174, 3729-30, 5400, 5493, 5500
conference 1866
costs 389
developed from progeny tests 166
economics of 5494
establishment 5496
evaluation of 5491
fertilizing 2177, 5496
insect pest control 2196
isolation 3731
layout 2179, 5490-1
management 2196
pollen supply 2179
pruning and tending 2179
spacing 3438
use of pesticides 155
Seed trees
criteria for trees 153
Seedlings
development 515, 2043, 5135-6, 5318, 5566
checked by Al 2432
effect of
canopy 5439
fungicidal seed treatment 2181
growth substances 5111
nematodes 1070
nursery treatment 2196
photoperiod 3776
provenance 2168, 3444
seed size 5316
shade 407, 2196
soil cultivation 3724
soil moisture 257, 314, 2221, 5314
soil temperature 2221
solar radiation 5249
substratum 5316
temperature 248, 1955
weedkillers 805
Seedlings—cont.
genetic variations 1897, 3605
lignification 2046
relation to provenance 1878
relation to subsequent growth 3605
diseases 836, 854, 4120
see also **Damping-off, Nursery practice, diseases**
effect of
defoliation 5566
flooding 4012
temperature 2042
hypocotyl, colouration of 3413
light requirements 314, 515, 5249
morphology 1915, 5224
mycoflora 5822-3
nutrient studies 3539, 5520, 5566
radiation effects 2194, 4029
root/shoot ratio 1897
small scale models in silviculture 3652
strangulation by marking tags 5517
water relations 3539
see also **Regeneration, natural**
Selection forest 2808
Selection systems 2807
see also **Méthode du contrôle, Silvicultural Systems**
Sex
effect on post-fruiting development 2050
ratios 2031
transformation 3495
Shade
effect on
fungus disease 2557
germination 2042
plant morphology 5247
seedlings 2042, 3520
lateral 1141
Shade tolerance 141-2, 5247
see also **Light, Nurseries**
Shade trees
for Cacao 2354
for tea 271, 993
Shelterbelts 637, 639-45, 2323, 2327-30, 3897-9, 4851, 5650-3, 6816
against desert 5591
against dust storms 2328
against snow drift 645, 5654
along roads and railways 645, 5650
economics 6781
effect on
air pollution 2328
crop yields 643, 2326, 2329, 3897, 5000, 5653, 6781
insect fauna of fields 643
microclimate 643, 2327
snow regime 5650
soil 5000
soil chemistry 4994
soil composition 2328
soil fertility 5656
soil moisture 2330
soil temperature 644
wind velocity 2328
in arid zones 639
in virgin steppe 2330
lay-out and planning 639, 642, 645, 647, 5654, 6781
management 647
protection of livestock 647, 3719
review 642
root, competition of 643

Shelterbelts—cont.
soil requirements 3543
spacing 641, 645
species 639-40, 3543
thinning 641, 5652
timber production 639
trials 2330
weed control 5608
see also **Geographical Index**
Shelterwood systems see **Silvicultural systems**
Shifting cultivation 2324
Shingles p. 570 (U.S.A.)
Ships see **Boats**
Shoot growth and morphology 136-9, 1854, 3376, 5129-30
apical dominance 3380
effect of
growth substances 120
light intensity 3521
phenology 116, 137
sources of nutrients 118-9, 3376
variability 5128
Shrinkage and swelling of wood 1286, 6308, 6323
anisotropy 1280, 1284
effect of
cellulose content 2939
chemical constituents 2939
chemical pulping 6405
extractives 2939
heat treatment 3105
ionizing radiation 6304
latewood percentage 4550
relative humidity 2940, 6323
steaming 3105
test piece dimensions 1282
water soluble extractives 6323
improved wood 1494
longitudinal 1282, 6321-2
measurement 2938, 6320, 6663
of
compressed wood 6318
compression wood 6322
particle board 1590
relation to
cell maturation 1281
density 1279-80, 2939
extractives 6300
fibre structure 1283
fine structure 4508
m.c. 1279, 1282, 2940, 6319
rays 1280
temperature 2940
wood anatomy 6321
restrained swelling 4762, 6318
superswollen state 6405
tensile stresses during shrinkage 4762
theory 4550
see also **Moisture, wood, Improved wood**
Shrubs see **Weed trees and shrubs**
Shuttering see **Buildings and their construction**
Shuttles 6532
Sieve tubes see **Phloem**
Silica in wood 1359
Silvicultural characters of trees 231-7, 443, 1936-46, 2146-7, 3455, 3500-10, 3514, 5235-40
see also **Species Index**
Silvicultural systems 1139, 3673, 4897, 5417
clear felling 5438
Silvicultural systems—cont.
economics of 399
Femelschlag 5757
high forest 1139, 5413
group selection 394, 415, 6177
selection 395, 1140, 2784
shelterwood 415, 1139-40
strip felling 5437
uniform 5415
in mountains 399
méthode du contrôle 5757
quasi-natural 5419
see also **Conversion**
Silviculture 385-622, 2060, 2106-2354, 3648-3925, 4846, 4860, 5400-5673
conference 6844
even-aged forest 3663
for veneer production 3653
in mountains 390
manuals 2113
quasi-natural 3663
relation to
changing markets 385, 2107
recreation 3206
small wood disposal 2108-10
wood properties 4601
research 391, 2060, 2133, 3650, 3652, 3657, 5413, 6781
review 2106
timing of operations 2815
trends 3648
tropical 3192
Site preparation 411, 468-76, 2171, 3720-4, 5412, 5480-3, 5569
bull-dozing 2118
burning 410, 2118, 3672, 3677, 3720-1, 5436, 5480
contouring 3844
cultivated patches 413
cultivation 402, 3672, 3677
dry peat soils 2171
herbicidal treatment 3670, 3677
mechanized methods 389, 401, 3721, 3807
methods compared 3807
ploughing 3724
removal of litter 413
removal of vegetation 413, 5480
ripping vs. ploughing 2171
scarification 3670-1, 5434, 5436, 5480
see also **Cultivation, Ploughing, Weedkillers**
Site quality 1088, 1111-5, 2741-9, 3293, 3623, 4353-65, 4977, 6131-41
classification and assessment 1088, 1111-5, 2741-9, 3293, 3623, 4353-65, 4977, 6131-41
climatic factors 16, 3247, 4361, 4363, 4990
CVP index 4990
ecological species groups 1114-5, 1764
environmental factors 3505
formula 2748
girth of top height trees 2742
growth-intercept method 4360
height, mean 1088, 1111-2, 2273, 4353, 4362-3
height, top 2742-3, 4354-6, 4358-9, 4368, 6131, 6137
multiple stems 6137-8
review of literature 1966
soil characters 16, 1734, 2744-5, 2749, 3308, 3505, 4354, 4361, 4976, 5265-6, 5281, 6132-6, 6139
topographic factors 16, 2749, 4364, 6135-6
vegetation types 1734, 1765, 2747, 4354, 4360, 4976, 5262, 6140-1
volume 2743-5, 3623, 6132
volume, dry-weight 6132
volume, max. m.a.i. 2743, 2745
indicator species 1765, 2076, 3293, 3528
indices for different species 6134
mapping 1113, 1734, 4976
relation to
climate 3505
diseases and disorders 1734
latitude 6134
log grade 6654
moisture availability 1764, 2510, 3528
nutrient content of soil 1761, 1764, 1966
soil drainage 6136
stand density 1111
volume production 2056
weight and efficiency of foliage 2056
windthrow 1734
wood properties 1247
tables 1112, 4401
see also **Indicator species**
Site studies, general 16, 3246
Skidding 716-31, 2400-8, 3931, 3967-85, 5718-44
bundled logs 728, 731, 2379
cable-crane 5732
cable to main cableway 706
cables, chokers etc. 731, 2404
cart 5733
coefficients 718, 2404, 2407
costs and economics 395, 4436, 5721
effect of soil 717, 5718
equipment 708, 2406
frictional resistance 717-8, 729, 3977, 5720
untrimmed trees 5720
'full tree' see **Logging, 'full tree'**
ground vs. log-end raised 2404, 2407
horse 716, 2402, 5720, 5733
horse vs. tractors 716, 2380
in peat swamp forest 704
in selection forest 3981
machines 681
mechanical skyline to railside 2403
methods 395
mule 715
on slopes 2400
ox 715
self-choking skidders 731
skyline see **Cableways**
sulky see logging wheels
theoretical mechanics 5718
tracked vs. wheeled 3985
tractor 5718, 5735, 5739, 6218
and horse team 728
and logging arch 3981, 5737
and logging wheels 5743
and winch 719, 725, 3981
'tree-length' see **Logging, 'tree-length'**
winch and cable 704, 708, 3974, 5718, 5726
work studies 703, 719-20, 723-4, 729-31, 5733

Skidding—cont.
see also **Cableways, Hauling, Logging, multipurpose machines, Tractors & skidders, Transport, Work studies**
Skyline see Cableways
Slash
disposal 409, 3937, 5697
brush cutter 2373
burning 795, 2472-3, 2475, 4049-50, 5792
costs 2473
oiling 2373
rolling choppers 5698
effect on planting costs 2258
gasification 3155
moisture content 1045
relation to
'group dying' 2525
insect attack 1045
plant nutrients 273
spraying to keep dry 2474
utilization 3155
volume 685
weight 2446
Sledges 3975
Sleepers, 6501
after treatment 4705
preservation of 1488, 4696
Slicewood see Veneer
Smallwood
pulping 1580
utilization 2108-11, 3655, 6535-6
difficulty of 2108, 2110
Snow
creep
effect of young plantations 2417
damage 2286, 2417
relation to
deer damage 5575
insect attacks 4267
spacing 5575
silvicultural measures to prevent 3875
to young plantations 2417
drift control 2417
effect on
form 4010
wood anatomy 4010
interception 5033
measurement 3254, 5033
melt, factors affecting 1785
recording, automatic 3254
Snow zone management 59
Soil(s) 28-57, 2363, 1741-76, 3260-3308, 4991-5032
acidity see pH
aeration, measurement 4992
Al content 2432
algae 1769
alkalinity 2433
analyses 595, 1758, 1815
bacteria 1767, 3294-5, 5021-2, 5027, 5278
biochemistry textbook 3271
biology 36-57, 1775, 1974, 1996, 5015, 5025, 5027, 5029
Ca content 268, 5622
Ca release 3268
C/Ca ratio 1759-60
cellulolytic activity 5015
chemistry 1653, 3627, 5010-1, 5272, 5282
Soil(s)—cont.
effect of
irrigation 5623
meadow vs. forest 5001
pure vs. mixed stands 1974
shelterbelts 4994
tree and shrub species 276, 3551, 3553, 4944, 5272, 5278
C/K ratio 1759
classification 5006-7, 5010, 5013
clay, movement 5002
C/N ratio 1749, 1759-61
CO_2 evolution 1767-8
colloids 5622
compaction 1965, 3261, 5299
conservation 1795
cores 3260
C/P ratio 1759-61
C/R ratio 1760-61
Cu content 268, 3270, 5274
dating, radio carbon 3272
degradation see podzolization
depth 3265, 3286
drainage 3264, 5238
effect of
climate 3289
conifers 5281
forest 272, 5000
parent rock 3289
Poplars 5285
recreation use 3261
shelterbelts 5000
vegetation type 5001, 5283
fauna 40-57, 1774-5, 3306, 5031
biotic factors 49
biomass 1773
breakdown of litter by 40-1, 47, 50, 1773, 3284
distribution 49, 51, 53-5, 3307
dynamics 46
ecology 46-55
effect of
aerial spraying 2606
afforestation 49
climate 48
organic matter 54
tree species 5279
interrelationships with microflora 45, 55, 5030
moles 57
relation to vegetation type 45, 47, 49, 52-3, 3633
seasonal variation 53-4, 3307
see also **Earthworms, Nematodes**
fertility 5020, 5282
assessment 2289, 3268
deterioration under conifers 4944
effect of
aspect 3273
cultivation 476
logging 3547
particular tree species 5278
pure and mixed crops 1976
removal of top soil 250
increased by forest vegetation 277
microflora 42
formation 275, 1977, 3268, 3287, 3289
effect of
aspect 3273
climate 3283
hardwood forest vs. agriculture 5002
humus 3283
Soil(s)—cont.
root exudates 5280
species 1975
vegetation type 275
freezing 1744
see also types, permafrost
fungi 47, 5028, 5821
antagonism 5834
distribution 39, 44, 5024
ecology 4089, 5279
effect of soil solution 1772
effect on
ground vegetation 43
seedling development 2214
soil properties 43
interrelationships 5823
mycelial growth 43
pathogens 4089
relation to vegetation type 45, 47, 5025
slime 1771
study methods 3299
see also **Litter, decomposition, Mycorrhiza**
hard pan 475
hydrophobic 3319
improvement, species for 281, 1973, 1975, 5656
mapping 3308, 5032
maps 5012, 5032
microbiology 1769, 5020, 5027, 5375
effect of
burning 3859
fertilizing 597
flooding 5026
oil pollution 765
tree species 5279
woody vegetation 5000
of peat bogs 45, 5030
of rhizosphere 37
microflora 4723
effect of tree species 5279
effect of oil pollution 765
effect on fungi 5279
micro-organisms and termites 4751
millipedes 48
Mn content 270-1,
Mo content 267
moisture 33, 3264
balance 1783
depletion 61-2, 255, 1743, 5037-8
distribution in profile 5039
effect of
clear felling 5037-8
cultivation 475, 3262
litter 61-2
micro-relief 260
mulching 3262
plant cover 5009, 5039
sub-irrigation 3262
subnormal rainfall 3262
thinning 3262, 5038
vegetation cover 3262
weeding 3262
effect on
diameter increment 1964
disease 2510
germination 5314
increment 256-7, 2298, 3262, 3530
litter secretions 2015
nutrient uptake 3540
photosynthesis 3366
regeneration 2298
root development 3851

Soil(s)—cont.
seedling development 302
soil fauna 54
stem m.c. 3533
translocation 3366
transpiration 256-7
in conifer plantations 1783
measurement 1741
with neutron meters 4991
methods of study 4991
movement 5039
relation to evapotranspiration 62
relation to vegetation types 259, 1742, 5238, 5394
seasonal variation 1742, 2061
storage capacity 3265
tension 257
wilting point 255
see also **Competition, Forest influences, Ground water**
mycostasis 1772
N content 2294
form 1748
fractionation 1746
variations 1745, 4995
vertical distribution 1748
N fixation see **Nitrogen**
N mineralization 1747
nitrification 36
nutrients 3544, 5587
balance 3549
cycle 3547, 3549
depletion 5276
effect of microrelief 260
foliar analysis as guide to status 260-2, 2288, 2433, 2542, 3546, 5269
leaching 3550
quantity and distribution 33
soil analysis as a guide to status 1759-60
see also **Nutrients, plant, Fertilizing**
organic matter content 2055, 3272, 3551
P content 289
pH 3551, 5584
changes 5002
effect on
seedling development 3764
seedling survival 3764
soil microflora 597
measurement 3267
relation to amount of humus 1973
physical properties 1965, 5011, 5375
podzolization 28, 5282
pollution by oil 764-5
porosity 3264
profiles 3274, 3287-8, 3290
radioactivity, natural 83-4, 5769
redox potential 3266, 4993
respiration 38, 3296-8
rooting depth 3570
saline 1972, 3545, 4013, 5592
stabilization see **Roads and road building**
structure 5009, 5283
surveys 1754, 5014, 6136
temperature
effects of
forest types 1743
litter 1744
plant cover 1744
Soil(s)—cont.
effects on
increment 3530
soil fauna 54
under burning slash 795
terminology 3246
texture 3643
toxic conditions 268, 2432
trace elements 3269
types 29-32, 3287, 3290, 3512, 4947, 5520
acid brown 2745, 5569, 5584
altitudinal sequence 29, 5007-8
brown earths 33
brown forest 1768, 5375
dolomite 1971
gleys 5262
hydromorphic 5009
lake deposits 2002
lateritic podzols 2294
limestone 1971
loess 5002
mica-schist 3274
peat 588-90, 5010, 5611
podzols 33, 3270, 3272, 5023
prairie 272
pseudo-gleys 3835
pumice 3265
relation to
landslides 5043
live ground cover 1766
management units 4416
regeneration, natural 1757
tree growth 5584
vegetation types 1757, 1767, 3622, 5006, 5008, 5011, 5013, 5026, 5274, 5282-3
rendzinas 3288
sands 5262, 5622
sandy podzolic 3269
serpentine 267, 1971, 3546
sod-podzolic 1976
solonchak 263
steppe 37, 5000
takyrs 551
terra rossa lessivé 5569
tropical 289, 1757, 1767, 4996, 5014
ultramafic 265-6
water relations with 2074
water-storage capacity 5622
see also **Erosion, Fertilizers, Fertilizing, Humus, Litter, Nurseries, Site quality, Vegetation, and Geographical Index**
Sowing, direct 548-51, 2248-9, 3802-5, 5555-8
combined with fertilizers etc. 2112
competition from weeds 406
costs 2248
covering 2248
delayed germination 549
density 3802, 5576-7, 5579
depth 3751, 5558
effect of
insolation 548
site preparation 406, 5480
slope 5558
fertilizing 562
in drills 562
in furrows 551
line 562
mechanized under canopy 2249
methods
aerial 549, 1195, 2118, 2803
Sowing, direct—cont.
broadcasting 550
in drills and furrows 3772
mechanical 2118, 2249, 3795, 3804-5
spots 550, 5557
various 3773
on
burns 549, 2118, 5557
cultivated strips 2112
protection against
deer 5557
rodents 2248
season 550
vs. planting 3801, 5555
with stratified seed 550
see also **Species Index**
Space flight
effect on seeds 5771
Spacing 565, 567-8, 607, 3827, 3829-33
economics of 565-6, 569, 3827, 3829, 5574
effect on
branching 322, 3828
canopy closure 5576
deer damage 5575
disease 3827, 5895
dry-matter production 2059, 2262
financial return 3831-2, 5578
increment and yield 437, 3827, 3830, 3833, 5577-80
mortality 5579
root systems 5579
snow and wind damage 5575
stem form 2262, 3828
wood properties 3827, 3883, 4671, 5578
yield 2262, 3828
of final crop trees 5633
relation to aspect and slope 2325
relation to mechanical weeding 5602
silvicultural considerations 5574
wide vs. close 5574
Species trials 424-45, 640, 1937, 2135-57, 3230, 3419, 3683-3707, 5450-68, 5590, 5648
for wood quality 3681
for pulpwood 6683
see also **Exotics, Provenance**
Specific gravity see **Density of wood**
Spiral grain see **Grain, spiral**
Spoil mounds
planting 5585
soils 3838-9, 3841
succession on 3839
tree growth 5587
use as fertilizers 2295
weathering 3839
Sprayers &c. 915, 3847
compressed-air 6011
knapsack 2468, 5700
mist 2643
portable 6011
sprayer-duster 2468
Swingfog 2643
tractor-mounted 3846, 5700
Squirrels
acorns eaten by 496
control 4167, 5912
damage to bark 2583, 4168
damage to shoots 2583
Stain 1502
blue 1027, 1288, 1503, 2384, 3078-80, 3935, 6583

Stain—cont.
caused by logging wounds 3935
'échauffure' 1564
effect of felling season 3935
effect of steering 1535
effect on
porosity of wood 1288
strength 6582
wood properties 1564
fungi 1027-8, 1539, 3079, 4095, 4261
heartwood 1373
in fast grown tropical species 4719
in fire killed trees 5790
in living trees 3078
insect vectors 3935
prevention 1503, 1550, 2384, 3078-9 3935
red 1510, 6582
Stand
composition 229, 398, 2080, 2101, 3619, 3646, 5346, 5382, 5396
density 3619
determination 2777, 4349-50
effect on
diameter growth 2273
height growth 2273, 5402
increment 3660
knot formation 322
volume increment 3863
optimum 3863
point density 6417
relation to
basal area 5632
soil moisture 3528
wood density 6417
see also **Spacing**
development 2789, 3628
effect of
fertilizing 2060, 4369
irrigation 2060, 4369
thinning 2060, 4369
prediction 398
diameter distribution 3619
structure 229, 398, 1079, 2788-9, 5425, 5457, 6150, 6177
age 2787
analysis 1141, 2079, 2088, 2784, 2786, 3619, 5346, 5382, 6149
changes in 1141, 2785
Charlier's function 2786
diameter distribution 6165-6, 6176
effect of insect attack 4227
effect of thinning 612
effect on
b.a. increment 6149
butt rot 399
increment 6150
insect damage 399
snow regime 399
utilization of solar energy 5426
wind damage 399
height distribution 5427, 6166
models 1140, 2783, 4403-4
'normal' 2807
of
mixed stands 3659, 6105
plantation vs. natural stands 2080
plantations, exotic 5456
plantations, native 5456
selection forest 1140, 2807
virgin forest 2080, 3663
storeyed 5426
Stand—cont.
tables 1128, 2717, 2803, 4402
volume 2803
yield 4396
variation 2790
see also **Mixtures**
Statistical methods 3772, 6074
analysis of variance 4369
design of experiments 886, 2790
dynamic programming 6837
in study of stand structure 3619
in study of wood structure 1237-8
international advisory group 3217
'Monte Carlo' method 5148
see also **Computers, electronic, Mathematical methods, Sampling**
Statistics, forest 3648-9, 4897, 4901-5, 4929, 6785, 6789
Stavewood
for silencing towers 4684
Steaming of wood 1407, 1535, 3105-6, 3145, 4752, 6625-7
see also **Hydrothermal treatment of wood**
Stem analysis 4605
Stem flow see **Rain**
Stems
fixed clumps 5324
Steppe, forest, evolution of 366
Stomata 1859
see also **Leaf etc:**
Storage 6614
chips 1551, 1553, 4779, 6651
green chips 3095
logs
decay control 6599
end coating 6649-50
in the forest 752, 2383, 4747, 5699, 6582
in water 1550, 1554, 3107, 4747, 6650
loss in wood substance 3095
protective treatment 2383, 6617, 6648-50
research 4747
roadside 752
sprinkling 1550, 6650
stacking 1550
pulpwood 1551
sawn timber
refrigerated control 3115
tropical timbers in Europe 4778
Stoves, wood burning 1415
Strangulation, by marking tags 5517
Stream flow
factors affecting 65, 1792, 3315
measurement 1791
seasonal 1791
see also **Forest influences, Infiltration**
Street trees 231, 3906
injury by de-icing salts 5764
injury from gas 5766
see also **Ornamental trees, Roadside plantations**
Strength of wood 1207, 1300-15, 2959-69, 4557-71, 6341-74
bending 6359, 6362
bolt-bearing 3017
cleavage 6370
compression 1312-3, 4570, 6365-6,
creep 1308-12, 2964, 4563-7, 6361
effect of
density 1314, 1542, 6305, 6366
Strength of wood—cont.
drying 2964, 3074, 3112
fire retardants 3074
growth and locality factors 1307, 2967, 4668, 6307, 6366
heat treatment, 1536, 3105, 3112, 4694, 6626
ionizing radiation 6304
knots 1559, 6346
moisture 1309, 1315, 1542, 2964, 2966, 4565-8, 6352, 6361, 6344-5
position in tree 1306, 2967
preservative treatment 4694
pre-stressing 1439
spiral grain 1560
steaming 1536, 3105, 6626
temperature 1542, 2964, 3112, 4566, 6361
elastic properties 1311, 1313-4, 1411, 1433, 1542, 2966, 4534, 4559, 4562, 6343, 6347, 6349 6351, 6354-5, 6361, 6365
fatigue 1433, 4563, 4566, 6371-3
see also **Creep in timber**
stiffness 1314, 6359
stress/strain relationships 1308-12, 1411, 2963-5, 4563-7, 4570, 6356, 6358, 6360-2, 6365, 6371
stresses, growth 1536, 4603
tensile 4787, 6347
Strength of wood products
beams, composite 1434-8, 6516, 6523
blockboard 6512
fibreboard 6706, 6724
furniture parts 6484
improved wood 6570, 6572
laminates 1433-8, 6512, 6514-6
mine timbers 4561
particle board 1590, 1592, 2962, 4818-9, 6348, 6373, 6527, 6706-9, 6713-4
piles 6497
plywood 1429, 3045-6, 4677-8, 6363, 6373, 6459, 6461, 6463, 6523
plywood-based components 6522-3
poles 1560, 6354
structural timber 4562, 4681, 4787
trusses 3050, 6524
see also **Glue joints**
Strength testing
bending 1434, 6348, 6362-3
bonding in particle board 1592, 2962
cleavage 6370
compression 1313, 1315, 6365-6
equipment 1301, 2960, 4557, 4560, 4569, 6344-6, 6349, 6369, 6372
fatigue 6372
micro-methods 2959, 2965
non-destructive 1302-3, 1591-2, 2960, 2962, 4557-60, 4564, 4681, 4727, 6343-7, 6349-51, 6355
photoelastic coating techniques 2961, 2965
stress analysis 1411, 1434, 2961, 2965, 6357-8
stress relaxation 1590, 2963, 6360
tensile 2965, 4568-9
variables: loading conditions 4563, 6366, 6372

Strength testing — cont.
variables: test pieces and their condition 1313, 1315, 1434, 4562, 4568, 6352, 6359, 6365-6, 6369-70
Stress grading 1302-3, 2960, 4557-60, 4681, 4787, 6343-7, 6349-50, 6355, 6359
Stump(s)
grubbers 2399
Stumpage values 2825, 6204
Subsidies 3928
Suburban forest(s)
amenity & recreation values 4915
management of 4915
Succession 335-48, 2071-2, 2101, 3501, 3609, 3625-6, 3628, 3635, 5338, 5340-2, 5346, 5392
after
disease attacks 5393
fire 343, 2469, 3580, 5342
mismanagement 5647
effect of
fire exclusion 355
human activity 5190
industrial effluent 3870
Pine plantations 345
general account 336
guide to forest treatment 337
in biological reserves 2104
in mixed forest 3666
in pioneer stands 5421
natural climax hastened by plantations 345
on
eroded slopes 340
moraines 5393
old fields 345
sand dunes 344
spoil mounds 3839
stony substrates 2071
strip-mined land 5586
termite mounds 2072
open woodland to closed forest 3614
relation to climatic change 5341
Suckering see **Propagation, vegetative, Regeneration, natural**
Sugar, Maple 2349, 3920-1
increment and yield 5423
protection of tapholes 5668
Sunscald 5871
Surface quality of wood materials 1410, 1555-6, 1587, 3126, 4631, 4785, 6664
measurement of 3126, 6663
roughness 3126
Surveying instruments see **Mapping**
Surveys, aerial 1143-55, 2792-2806, 4405-14, 6074, 6168-71
bibliography 2792
contrast compensation 1148
detection of disease 2506, 6169
estate valuation 1144
estimation of
crown closure 1148, 2800, 4410
crown diameter 1148
diameter 2798
fire damage 1150
forest area 4408
growing stock 6170
height 2798, 4407, 4409
insect damage 1150-5, 4414, 6169
plant health 1149
silvicultural condition 4413
site quality 4977
Surveys, aerial — cont.
stand age 4406
stand density 1148
stand height 4406
tree numbers 2800
volume 2798, 2802, 4409, 4411-2, 6073
interpretation of photographs 1148-9, 2793, 2800
accuracy 2798, 4406-9
apparatus 4409
effect of lens size 1149
effect of tilt 4407
identification of
soil types 2805
species 1149, 1155, 2798, 4406
understorey fire hazard 2804
vegetation types 1145-6, 1155, 2805
precision 2802
radial line sampling 2801, 4408
spectrophotometric 1150
stratification for inventory 6170
stratification of vegetation 6171
training 2794-5, 4405
location of roads 1155
mapping 2796
operation recorder 4414
parallax wedge 2797
preparation of mosaics 2796
use of
coloured photos 1149, 1152-3, 2799
helicopters 1079, 2806
infra-red mapping 1147, 2506, 6168-9
large-scale photography 2797-8, 4413, 6168
multispectral photography 2799, 6168
photos in the field 2793, 4405
radar-altimeter 1143; p. 782 (Guatemala)
spectrozonal film 1150-1, 2800
UHF(K-band radar) 1146
visual reconnaissance 2570, 2806
Wild B8 Aviograph stereoplotter 4409
Surveys, forest 1097, 1099, 6075, 6143, 6790-9
classification on b.a. per acre 6102
combined air and ground 1098, 2793, 6171
forest and soil 1098
helicopters for personnel transport 4452
of vegetation 3621
see also **Enumeration surveys, Land use, Surveys, aerial**
Sweep see **Stem growth and form**
Symbiosis 5286
ants with trees 5303
fungi with insects 1027
involving insects 70
see also **Bacterial, symbiosis, Mycorrhiza**
Synecology 301, 330-59, 362, 2068-80, 3293, 3576, 3608-21, 5334-46
artificial vs. natural communities 5344
classification of communities 359
continuum concept 349
evolution of ecosytems 5341, 5344, 5351, 5355, 5392
herbaceous layer 354
Synecology — cont.
measurements and methods 358, 3644, 5343, 5345-6
association analysis 357
gradient analysis 350
Kuchler's system 356
ordination techniques 358, 2078, 2100, 3620
terminology 335
textbook 5334
theory 335, 349-50, 5335
see also **Succession**

Tall oil 3141, 3163
Tannins 1346
chemistry of 1628, 4592, 6740
effect on plant decomposition 5019
ellagic 1345
use as preservatives 1480
Tanstuffs
bark
Fir 4831
Oak 1627, 4831
Pine 4831
Spruce 4830
tannin content 4831
Wattle 4219, 5657
Willow 648
Yew 4831
yield and profitability 5657
yield, effect of defoliation 4219
cutch 6733
leaves and shoots 1629
Taper
border vs. forest grown trees 3596
cuttings vs. seedlings 5564
effect of pruning 5642
of juvenile core 4607
tables 4306, 4312, 6086, 6091, 6115
see also **Form, stem**
Tar, wood 4828, 6736-7
effect on metals 6735
physical properties 3160
use in pesticides 3158
Taungya 5443
Taxation 1717, 6846
effect on forest management 1717
valuation for 2826
see also **Valuation**
Taxonomy see **Botany, systematics**
Technical aid, sources of 4955
Temperature(s)
air 3253, 4985
as a site factor 3252
critical
variation with species 5255
effect on
dormancy 3606, 5257, 5808
frost hardiness 246, 5255, 5759
fungal diseases 2543, 5871
growth rate 3530, 4386, 5260
photosynthesis 5254
phytotoxicity of weedkillers 806
root growth 2004
seed 2187
seed ripening 2032
seedlings 248
strength properties 4565-6
in forest, annual trend 5357
in forest vs. open 4982
inside forest 3253
in tree crowns 5808
interaction with light 3607, 5257
micro-climate mapping 3252

Temperature(s)—cont.
of leaves
assessment from air 1147
of stems 4985
on clear felled heathland 5759
relation to solar radiation 4986
thermal balance of forest 4985-6
vertical distribution 21, 27, 4986
see also **Forest influences, Frost, Heat, Microclimate, Soil, temperatures, Winter injury**
'Temps de passage' see **Recruitment period**
Tending of stands and trees 609-36, 2300-22, 3872-94, 5407, 5600, 5625-47
cutting undergrowth 5645
improvement felling 2822
manual 3872
priority of investment 2823
topping of wolf trees 5626
Tension wood see **Reaction wood**
Teratology 3400
Terminology
forest economics and accounting 2835
mycorrhizae and fungal association 283, 1978
site 3246
soil science 3246
see also **Glossaries, Nomenclature**
Termite mounds
flora 5388
role in forest succession 2072
Termites 1527-33, 3102-4, 4751, 6623-4
attack on
improved wood 6574
living trees 922, 4751
structural timber 1531-2
biological studies 1527, 1530, 1533, 3055, 3104, 6624
colony development 922
conference on 3103
control 921
chemical 922, 3104, 4697
digestion of wood by 6615
extractives toxic to 3098
field test and techniques 1528
fungi attractive or toxic to 4751
handbook on U.S. termites 1796
identification 3104
introduction in imported timber 3102
key 5046
laboratory rearing 1530, 6623
moisture requirements 6624
population assessment 922
resistant timbers 1370, 1529-30, 1532
systematic studies 1527, 1797, 3325, 5047
temperature requirements 1533
see also **Insect pests (Isoptera) and Preservation, wood**
Terrain classification 2363
Tetralozium see **Seed, testing**
Thermal properties of wood 3073
conductivity 1588, 2932, 4537
diffusivity 4537
freezing and thawing 1270, 2931, 4547-50
ignition and combustion 1268, 1497, 2934, 3034, 4538-9, 4715, 6312-3; p. 201 (Canada)
measurement 1268, 1588, 4540, 6312

Thermal properties of wood—cont.
of fibreboard 1588
of particle board 1588, 4539
of plywood 2934
predicting maximum surface temperature 1267
protecting steel girders 3049
specific heat 4540
tests of fire hazard 6705
Thermal relations of plants see **Energy transfer, Temperature**
Thinning(s) 611-8, 2301-14, 3829, 3873-80, 3885, 5628-33
analysis of results 5625
by burning 3880
calculation of intensity 612
chemical 609, 624-5, 2316-7, 6012
chipping 2378, 2380
competition index 616
control 611
'corridor' 2377
costs 2389
criteria, crown shape 617
criteria, wood density 2312
critical b.a. 613
economics of 610, 616, 728, 2389, 2822, 3879, 4432, 6201
effect on
assortments 4332
basal-area increment 2309
crown density 5375
crown development 318
diameter increment 3865-6, 3880
disease 2522, 4108, 4290, 5870
financial yield 5578
fire danger 5782
height growth 3880
increment 615-6, 2305, 2309-10, 3878-80, 5626, 5628-30
log quality 616
maximum girth 2742
mean basal area 2305
microclimate 5375
nutrient deficiency 2292
snow damage 2377
stand composition and structure 398, 612, 615, 1813, 2308
wood properties 4671, 5578
transpiration 253
yield 3865, 3879, 5578, 5632, 6168
engineering aspects 3989
extraction 728, 2378, 2380, 5721
billets vs. tree lengths 3969
by cableway 3971
for maximum volume production 5628
for quality 5628
grades 616, 2313
hand-book 611
heavy vs. moderate 2756
mechanization 5715
models 615, 2822, 6201
of
advance growth 609
dense young regeneration 2316
mixed stands 3874, 3878
pulpwood stands 5715
small wood 2378-82
organization of operations 609, 2377-80, 2382
pre-commercial 2316
relation to
initial spacing 2261
logging 2261
rotation 569

Thinning(s)—cont.
removal of 'wolf' trees 5626
research 2300, 2303, 2307
review of literature 613
row 615, 2261, 2305, 2381-2
'row' and 'selective' 615, 2379-82, 3875
sample plots 5625
schedules 1120, 2302, 2310, 5629
season, effect on disease 2522, 4108
selection of crop trees 5630, 5633
timing 2261, 2309, 2311, 3879
tools & equipment 3957
trials 614, 618, 2302, 2313, 3873, 3876-7, 3879, 5628-9, 5631-2
lay out 2304
trimming 2378
utilization 6498
work studies 3940, 3958-60
yields 3864
see also **Work studies and Species Index**
Ties see **Sleepers**
Timber measurement 6074-5
automatic devices 6122
calculation of error 1108, 2731
conversion factors 1109, 1110, 6123-4
hoppus sawlog tables 2732
log-rules 4339
log-volume formulae 2733
methods 1105, 4338
metric system implications 6229
pulpwood 2730, 4337, 6123-4, 6129
regulation 1105
stacked wood 2735-6, 6120
standardization 4466
standing trees 4331, 4334, 4336, 6129
tables, log volume 4339
uniform rules for E.E.C. 6670
weighing 4338, 6118-9, 6121
xylometers 2731
Timber trade 2853, 6241
Common Market, effect of 1202
conferences 2852
consumption by railways 6220
documentation centre p. 782 (Italy)
exports 4463, 6237; p. 378 (Indonesia)
external balances 1199
imports 4463, 6231; p. 570 (Japan)
in developing countries 1201, 1206
international 2847-8, 4458
resources in world economy 4458
standards 6670
statistics 8, 1199, 1658, 4456, 4461, 4463, 6220, 6223-5, 6240
structure 4453
supply and demand 2847, 2852, 4458, 4463, 6220-2, 6237, 6776
trends 1201, 2107, 2844, 2847, 2849-52, 4460-1, 6225
tropical hardwoods 2848, 4484-5, 6225
see also **Marketing, Prices**
Timber yards 1548-54, 3116-20, 4776-9, 6646-52
conveyors 3117
mechanical grabs 3116
sorting 3117
timber handling 3116
Timberlines
changes in 2073
climatic factors 2073-4
determination and mapping 2073
ecological studies 336, 2074-5

Time studies see **Work studies**
Tissue cultures 1906-7, 2537, 4142, 4504-5, 5758, 5193, 5881, 6067
see also **Histology, tissue culture**
Tolerance see **Shade tolerance**
Tools and equipment 4094
directory of manufacturers 2360
Gyro-carrier p. 379 (U.S.A.)
manual 5702
Topography 2363
classification relation to logging 3929
Torrent training 3994
Trace elements see **Nutrients, plant**
Tractors and skidders 703, 717-31, 2400, 2402, 2405-8, 3967, 3975-87, 5718, 5724-5, 5734-44
agricultural, adapted for forestry use 720
fitted with bulldozer blade 3981
for use on slopes 3982, 6218
forestry
multi-purpose 726
four-wheel drive 722, 727
frame-steered 3980, 5736-9, 6218
FT-2 2400
'Go-Tract' forwarder 3933
'Highland Skidder' p. 782 (Gt. Britain/Scotland)
Lawson tree-length 3933
load-carrying 722
loading equipment 3981
manoeuvrability 729
noise 5680-1
'one-man logger' 5693
performance, analysis of 3978
slash disposal 3937
TDT-55 3976
TDT-75 5681
Timberjack 3980, 3985, 5736
Tree Farmer 3980, 3983
two-wheeled 5743
tyres 717
Valmet 2408, 3980
wheeled 703, 718, 2400, 2408, 3983-5, 5434, 5693, 5735, 5739, 5743
articulated 703, 3984
S-7B Hough Paylogger 5693
vs. tracked 3985
work studies 3978
see also **Skidding**
Trailers 3975
Training of forestry workers 670
see also **Education and training**
Translocation
effect of shoot orientation 107
effect of temperature 112
in phloem 111, 5093
in xylem 254, 1843
of
growth substances 5094
mineral nutrients 1843, 3347
organic substances 111
photosynthates 3366
radioactive isotopes 1318, 3347
solutes 5096
sugars 5097
sugars and amino acids 1851
water 107, 254
weedkillers etc. 809, 2487
seasonal variation 3366
to developing cones 117
Transpiration 3313
amounts of water transpired 1784
anti-transpirants 2263, 5263
Transpiration—cont.
diurnal variation 3365
effect of
intercepted water 5036
meterological factors 5094
mulching 3778
temperature 5896
measurement 102, 1836, 5098
from aerial survey 1147
heat-flow analysis 107
on detached leaves 109
technique 1840, 3362-3, 3365
of different species 1840
of ground cover 3369
of roots 3778
on dry site 1839
relation to
age and vigour 1840
cambial activity 1841
light intensity 3368
provenance 459
soil moisture 3367, 3370
temperature 3370
resistance 109
seasonal variation 1784
stomatal control 1838-9, 3368
see also **Energy transfer, Evapotranspiration and Planting stock**
Transpiration felling see **Sour-felling**
Transplanting mature trees 3907
Transplanting see also **Nurseries and Nursery practice**
Transport, logs and timber 703-35, 2400-12, 3967-87, 5718-49
animals vs. machines 2401
assortment value and choice of method 4438
by
chute 5732
draught animals 2401
lorry 3986, 5744
pipeline 2409-10
rail 2736, 3986
road 1194
sea and lake 6231
choice of method 672, 4438
classification of soils and terrain 673
coefficients of friction 5732
costs 1185, 2401, 5690
economics of 2410, 2816, 2834, 6207, 6230
factors involved, theory 5718
integration, water and rail 5745
mechanisation of operations 5745
multi-purpose machine 3981
of
chips 2409-10
packaged timber 1548, 3094
pulpwood 1194, 3968
operational research 4443
organization 2840
size of logs 2834
textbook 3975
time studies 2401
truck and railway p. 782-3 (Sweden)
vehicle dynamics 3986
work studies 3940
see also **Cableways, Floating, Hauling, Loading, Logging, Roads, Skidding, Sledges, Tractors and Skidders &c.**
Tree classes 652
basis of thinning 398, 2302
Tree classes—cont.
movement of individual trees 2785
relation to
crown length 2737
sap flow 1842
wood properties 2993
Trimming
effect on insect pests 5854
machines 699-700, 2371-2
power saw 2388
work study 1186, 2388
see also **Work studies**
Tropical forest
atmosphere in 19
economic aspects 6801
management 5411
recreation 3202
stand structure 2079, 6165
wildlife 3202
see also **Vegetation types**
Tropical timbers 1210-6, 1219-25, 2861-6, 2869, 2871, 4483-5, 4487, 4489, 4491-2, 4497-4500, 6223-5, 6252-9, 6261, 6263-4
anatomy 5402
consumption in Europe 6224
gluability 6454-5
mechanical properties 1279
plywood species 4649, 6255
preservation 6556
properties and uses 1218, 1221-5, 3681, 4498
pulpwood species 6254
sorption characteristics 4551
utilization 6249, 6257
Trucks see **Lorries**
Tumours
caused by bacteria 2533
Turpentine
chemical constituents 1337-8, 3171, 6760
chromatographic analysis 3171
effect on metals 3153
sulphate 1337-8
taxonomic value 3353, 6760
uses 1647, 3173
Turpentining see **Resin-tapping**
Tyloses see **Wood anatomy**

Ultrasonic waves
use in timber testing 2962, 6351
Underplanting 2268
hardwoods with conifers 543, 2266-7, 3809
smothering by litter 543
with nitrogen-fixing plants 5597
Understorey
effect of removal 3872, 5646
identification from aerial photographs 2804
Universal logging machines see **Logging, multi-purpose machines**

Valuation
expectation, stand 2821
forest influences and amenity 2831
forest land 2828
forest properties
estimated vs. market value 1184
for taxation 2826-7, 4434, 6205
growing stock, expectation vs. market value 2835

Valuation—cont.
principles of 6196-7
'soil rent' vs. 'relative soil rent' theories 1179
recreation forests 2831
timber 1093, 4433
utilization vs. yield value 2826
Vascular systems 5139
Vegetation types 360-84, 1911, 1950, 2071, 2081-2105, 2114, 3191 3455, 3622-47, 4860, 4883, 4901, 4947, 5237, 5343-99
altitudinal 380, 3623, 3629-30, 5371, 5387, 6784
biotic influences 2010
bogs 45, 275, 341, 367, 3601, 5030
campo cerrado 377
changes in 335
classification 349-50, 358-9, 379, 2084, 2096, 3618, 3623, 3626, 3637, 3647, 5374, 5381
climatic 3623
comparison of diversity 2084
desert forests 2064, 5374, 5391
dry forest 372, 2090, 3656, 5408-9, 5778
effect of human activity 5190
effect of industrial wastes 3870
fens 3601
flood-plain forest 5262, 5347
forest steppe 366
hammocks 3642
humid tropics 3635-6, 5384
identification from air photos 1146, 1155
indicator species 3623
littoral forest 3656
mangrove 3632
mapping 1146, 2077
maps 3636, 5012
miombo see savanna woodland
monograph 2086
montane 1663, 2082, 3613, 3624, 3644, 3654, 3659
moss species in 3617
palm swamps 376
peat bogs 3639-40
phenological variability 5351
phreatophyte communities 5395
physiognomic stages 356
rain forest 358-9
lowland 3603, 3633, 5382-3, 5443
montane 3603, 5387
temperate 2759
tropical 372, 2027, 3603, 3608, 5415, 5443
relation to
aspect 360, 380, 5371
assortments 4333
biota 3634
climate 360, 363, 379, 3633, 5348
fire 5781
geology 368, 3643
lichens 2676
management units 4416
microclimate 3634, 5348
previous agricultural practice 5355
silvicultural treatment 3608
site types 346, 2102, 2747
soil 272, 360, 363, 371, 379, 1749, 1973, 2102, 3273, 3289, 3290, 3622, 3629, 3633-4, 3643, 5006-8, 5348, 5366, 5368-9, 5371

Vegetation types—cont.
chemistry 268, 3627
moisture 5371, 5394
soil properties 5283
topography 371, 2102, 3273, 3634, 5369
riparian 337, 2095, 3625
savanna 372, 5385-6
savanna woodland 384, 3614, 5389-90
grasses 3614
scrub woodland 4913
seasonal aspects 5385
second-growth hardwoods 5340
semi-arid 1749
'semi-savanna' 347
shrub associations 355
silvicultural treatment 337
steppe 367, 2085
subalpine 361, 5348
'subterranean forest' p. 783 (U.S.S.R.)
survey 2077
swamp forest 2089, 2419, 3656
taiga 2096, 3601
termite mounds 5388
thorn forest 2091
tidal forest 2087
transition zones 346
tropical 381-3, 3642, 4882, 5380-1, 5399
wild-fruit forests 650-1
zonation 352
see also **Geographical Index**
Vegetative propagation see **Propagation, vegetative**
Veneer(s) 3028
blending 4660
checking 3044
cutting 3026
forces 4658
knife wear 6480
lathes 3027
profile of knives 6479
quality control 6475
lathe setting 4657-9, 6475-6, 6478, 6482
relation to structure 6474
resistance 4658
rotary 4656, 6472-4, 6477
temperature 6475, 6482
tension wood 6482
see also slicing
defects 4784, 6664
dryer fires 6644
drying 6462
control 1547
machines 4773-4
rollers vs. press 6643
impregnation with PEG 3044
industry 4470
logs 6431
core 4675
criteria for evaluation 4675
defects 1556
density 6508
grading 1567
heating 6476
hot water treatment 1406, 1408, 6472-3
steaming 1407, 3106, 6627
manual of 1425
mechanical stretching 4676
quality 3044, 4656, 4659, 6474
research 1425
sliced 3026, 4658-9, 6481
slicing 6664

Veneer(s)—cont.
steaming for colour 6627
stress relief 4676
surface finishing 4661
timbers for 3653
yield 3043, 4675
see also **Plywood**
Vigour, relation to sapflow 1842
Virgin forest 335
composition 2080, 3624, 3663
development 3664
increment in 2120
mycorrhiza in 5288
stand structure 390, 2080, 3663-4, 5430
Virus diseases
diagnosis 5910
of
insects 913-4, 970, 985, 1054-6, 2631, 4180-1, 4228, 4231, 5993-4, 6050, 6054
plants 2475, 2495
trees 881, 883, 4160, 5813, 5905, 5907-8
insect vectors 883, 913, 968, 4161, 5909-10
mosaic 5906-7
transmission 882-3, 4161, 5909
textbook 5904
Vitamins
effect on rot fungi 1521
from conifer needles 4835, 6750
from fruit 649
Voles see **Mice and voles**
Volume
determination 1092, 2725, 6076
aerial photos 4410-2
automatic calculator 1108
different portions of stem 2703
errors 1108
form-height and b.a. 6086
formulae 1108, 2706-7, 2711-2, 4304, 4313-4, 6089
functions of volume 4307, 4313-4
mean height-curves 6081
mean tree 1091
methods compared 2705
nomograms 2703, 4304
of forked stems 1091
of young stands 2707
slide rules 1103
stump measurement 1086
use of angle count 4309
volume tables 1091, 1093
merchantable 2729, 4334, 4336
sawtimber 4307
series 1092-3
see also **Assortments, Increment, Timber measurement**
Volume tables 1081, 1091, 1094-5, 1121, 2688, 2705, 2708-10, 2713-8, 4296, 4308-11, 4313-20, 4339, 6074, 6088-95
aerial-photo 2803
assortment 1080, 2728, 4311, 4315, 6115-6
board-foot 2710, 2712
branch volume 6090
by height classes 1081, 1094-5
by site classes 1081
for young stands 2717
form-class 4312
local 2718, 4317-8
merchantable volume 2709

Volume tables—cont.
relation to top height 1081
single-entry 4315
tariffs 2708, 2713, 2716, 6089
total tree 6092
tree-length 4311
use of
electronic computer 2708
form quotients 4308
normal form factors 4308
regression analysis 4310, 4317

Wages 3931, 5683
bonus systems 742, 3980, 5683, 6173
for pulpwood logging 6209
for worker-owned machines 5683
in private forestry 1718
lumber industry 6849
piece rates 2386-7
structure 6849
Wallboard see **Fibreboard**
Walls
moisture in 6530
plasterboard/plywood 6528
siding 6529
strength tests 6528
Waste liquors 3129
Waste wood, industrial 685-6, 1186, 1675, 2322, 4673, 6679
baling 3118
bark 6534
calorific value 4688
chip yield 3025
collection 2374
incineration 6537
sawdust 6534, 6679
transport 1420
utilization 3155, 4689, 6232, 6237, 6535-6
boiler and domestic fuel 4469
cattle bedding 4689
charcoal 3154
chemical 6748
chipping 1205, 1402
economics of 1402
fibreboard 1460, 6534
fodder p. 378 (Finland)
particle board 1460
pulping 1460, 3135, 6679
soil amendment 1460
Water conservation 64, 6817
effect of fertilizer 5622
in tropical highlands 3314
reservoirs 6820
Water relations 251-9, 1838-40, 1961-4, 3531-6, 5037, 5263-4
at stages of growth 251
balances 23, 3608, 3310, 4006
consumption by vegetation 108, 1783
content of foliage 252, 5170, 5783
content of shoots 106
content of trees 5264
effect on tracheid formation 2901
hydrological role of forests 3550
internal moisture deficit 106
mangrove swamps 5088
of buds 5122
of seedlings 3367
relation to provenance 150
requirements by plants 1961, 6152
seasonal changes in content 4006

Water relations—cont.
see also **Drought, Forest influences, Hydrology, Physiology, Soil moisture, Transpiration**
Water transport see **Floating and rafting**
Watering
soil injection 2296
Watershed see **Catchment**
Water-table
effect of depth
on fertilizing effects 6155
on growth 2418, 3530-1, 3534-5
on root system 2006
effect on depth
of clear felling 1777
Wattle see **Tanstuff's, and Species Index (Acacia mearnsii)**
Waxes, vegetable 1632, 4845, 6742, 6767

Wedge prisms see **Angle count, Diameter measurement**
Wedges
hydraulic 5711
Weedkillers 521, 624-5, 799, 803, 815, 3893, 4048, 4055
Afalon see linuron
Alipur 519
allyl alcohol 5531
amino-triazole 468, 809, 5607, 5800, 5804
4-amino-3, 5, 6-trichloropicolinic acid see Tordon
Amizine 2271-2
ammate 819, 2461, 3848
ammonium thiocyanate 468
anfostan 4058, 5605
Ansar 160 630
Aresin 2482
arsenical 4057, 5637
atrazine 520, 804, 3806, 3816, 4060-1, 5604-7
basinex 412
Berceme AMS 46 3848
bromacil 629, 3722, 5607
Brushkiller 2488
butyric acid 808
cacodylic acid 630-2, 2316, 5638
Casaron 412
CDAA 804-6, 4060-1
CDEC 804-6, 4060-1
chlorothiamide 412, 520, 658, 800, 812-3, 2480, 3847, 3849, 4069
chloroxuron 5608
chlorthal dimethyl 5533
Dacthal 5534
dalapon 468, 798, 804, 3849, 5481, 5605, 5607
dazomet 5531
DCPA 804, 4060-1
dicamba 623, 625, 627-9, 813-4, 5636, 5804
dichlobenil 520, 800, 3722, 5607
dichlorprop 3882
dinoseb 5533
diuron 804, 5533
DMTT 5532
Dowpon 412, 2482, 3847, 3849
endothal 5533
EPTC 804-6, 4060-1, 5533
F compounds 2269
fenoprop 3882
fenuron 623-4, 2489, 5636
fenuron TCA 623
Gesaprim 807

Weedkillers—cont.
Hoe 2831 2482
Hoe 2831a 2482
Hoe 2839 2482
ipazine 804
Karmex 2482
linuron 5533, 5608
maleic hydrazide 5790
MeBr 5531
metam 5531
monuron 804, 806, 2461, 4061
$NaClO_3$ 2269, 4058
naptalam 5533
neburon 5533
NH_4 sulphamate see ammate
Noruron 5533
NPA 804-5, 4061
paraquat 522, 2272, 3849, 4067, 5607-8
PBA 818
PCP 5533
picloram 624-7, 629, 806, 813-4, 2317, 2487, 2489, 4059, 4068, 5636, 5798, 5803
plantalin 5536
Prefix see chlorothiamide
prometone 804
prometryne 5536
propazine 2222, 5536
pyrazon 5533
Ramrod 519
Sesone 804, 806
Silvisar 510 630
simazine 468, 519-20, 804, 2272, 2461, 3722, 4062-4, 4066, 5481, 5536-7, 5605-8
sulfallate 5533
swep 5533
TBA 818
TCA 5481
Tordon 5635
see also picloram
Tordon 50D 2317
Tormona 80 5802
Tormona 100 5802
Treflan 5535
triazines 5536, 5801
see also atrazine, simazine, prometryne etc.
trichloroacetaldehyde 5605
Uvon 5536
W6658 5536
see also simazine
Weedazol 815
wonuk 5605
2, 4-D 609, 624-6, 804, 3850, 4056, 4060-1, 4068, 4070, 5636, 5638-9, 5804
against hardwoods 3875
basal spraying 819
degradation in litter 2486
effect on conifers 805
2, 4-D amine 5638
2, 4-D + dalapon 798
2, 4-DEP 804, 5533
2, 4 DES 5533
2, 4-D + picloram 5803-4
2, 4-D plus 2, 4, 5-T 810-1, 818, 2270, 2488, 4451, 5804
2, 4, 5-T 609, 622, 624-6, 629, 804, 809, 817-9, 2317, 2487, 2489, 3721, 3849-50, 3881-2, 3884, 3892, 4059, 4069-70, 4451, 5603, 5636
against coppice regrowth 819

Weedkillers—cont.
against Eucalypts 3883
basal spraying 819
Weedkillers, application, effects &c. 625, 796-819, 2222, 2476-91, 4054-70, 4451, 5606, 5794-5804
absorption and translocation 808-9, 4062, 4064, 5800
aerial sprays 411, 622, 2270, 3882, 5604
assessment 4069
axe cuts 3892
basal injections 3883, 5635
basal sprays 3884
before planting 468, 5481, 5535, 5605
behaviour in the soil 2269, 2479, 5532
breakdown in the plant 4062
combined with cultivation 5481, 5604, 5606
combined with fertilizing 5534
costs 2483, 3846, 4055, 5605, 5802
damage to
clone gardens 811
nursery stock 4067, 5536
plantations 813, 5605
Poplar plants 807
young trees 3850
dosages 586, 625, 629, 800, 813-4, 3848, 4055
drilled holes 630
dusting 2482
economics 5604
effect of
soil moisture 2222, 2480, 5532
soil temperature 2222
surfactant 4068
effects on
adventitious roots 810
catchment areas 5798
CO_2 uptake 4061
conifer reproduction 806, 2270, 4059, 5481, 5532-4, 5537, 5607, 5799, 5803
growth 4066
hardwood seedlings 412
human health 4056
needle structure 4065
nutrient uptake 4063
photosynthesis 4060-1
respiration 804, 4060
seed 5801
seedlings 519-20, 522, 805, 2222, 2481, 3816, 3849, 4058, 4060-5, 5800-1
shrubs 5802
soil 4057
tree crops 5802
water quality 5797-8
equipment 800
foliage sprays 814, 3848, 5803-4
for thinning 2317
frills 625
general sprays 818
granular 623, 658, 812, 814, 2480, 3847
in
Christmas tree plantations 798
forest 2482
mature stands 815
nurseries 799, 801, 803, 812, 2479, 4055, 4066-7, 5534-7
regeneration 800
seed orchards 5799
shelterbelts 5608
Weedkillers, applications, effects,&c—cont.
young plantations 586-7, 798-9, 812-3, 3846-7, 3850, 4055, 5481, 5606
interaction with fertilizers 4064
mechanism of action 100, 2487
mist 810, 2482, 3850
pelleted 623-4
phytotoxicity 2481
protection of crops 3850
protection of seedlings by activated charcoal 3722
repeated applications 803, 2488
safety precautions 4067
season 622, 626, 628-9, 631, 811-4, 818-9, 2270, 3881-2, 4070, 5635
selectivity 2485
soil fumigation 5531
spraying, broadcast 2488
spraying, individual plants 2488
stump treatment 3884
translocation 2487
tree injection 624, 626-7, 629-32, 819, 2420, 4070, 5638
uses
for bracken control 813
for cleaning 3849, 4055, 5603, 5802-4
for grass control 412, 5799
for site preparation 412, 623, 810, 817, 3721, 5605, 5637, 5803
for thinning 624-32, 2316
in silviculture 2484
water/oil emulsion 2488
wettable powder 5534
see also **Poisoning, Sprayers, Nursery practice**
Weed trees and shrubs 3901, 5794
control
biological 2491
brush cutters 797
burning 802, 2490, 3902
chemical 802, 818-9, 2490, 3721, 3848, 3884, 3902, 4451, 5603, 5635, 5638-9
see also **Weedkillers**
mechanical 802, 3893, 3902
silvicultural 5600
see also **Poisoning**
Weeding
cultivation vs. chemical control 2271, 3806
effect on increment 3866
in plantations 5602
mechanization 5602
response of hardwoods 2271
tools 5602
work study 3845
Weeds, herbaceous 816, 5794
competition 406, 2294
control 816, 2477-8, 4054, 5481, 5535
biological 816, 5795-6
by litter 2015
by mulching 2259
chemical see Weedkillers
chemical vs. hoeing 5605
cultivation vs. chemical 2271
cutting 816
directory of research workers 2476
hosts of tree fungal pests 862-3
on old field sites 2271
phenology 796, 2067
Weight of trees 2740, 6129-30
Wetting agents see **Fire fighting**
Wilding stock 2252
Wildlife 3202, 5057
acceptable density 4170
conservation 80, 3333, 3338, 3340, 4927, 6807
control 892, 2577
damage 2577
effect of pesticides 919
effect on vegetation 76
forage
effect of pesticides 2489
forest as habitat 6803
in tropical forests 3202
legal regulation 78, 80
management 76-80, 1810, 2577, 3200, 3204, 3336-9, 4927, 5058, 6808
observation enclosures 3204
population studies 79
provision of cover 73
provision of forage 1810, 2577
relation to forestry 3339
relation to hedges 3335
repellents 2577-8
survey 6074
Winches
for use in thinnings 5726
remote-control 5726, 5742
tractor mounted 725
2+1 drum 719
see also **Cableways, Skidding**
Wind(s) 324
as an ecological factor 2073
in forest clearings 4989
in forest stands 21
effect on
litter fall 5003
seasoning 6629
seed orchard lay-out 5490
temperature 21
measurement 2074, 3254
sway 6414
see also **Shelterbelts**
Wind damage 6174
accounts of particular storms 3999, 4004
crown topping to prevent 2424, 5758
effect of
clear felling 4003
crown type 755
drainage 4001
regeneration system 3999, 5757
rooting habit 2422, 4001
soil depth 4002
soil m.c. 2424, 4002
soil type 755, 2422, 2424, 4002, 5756
stand structure 755, 3999, 5756
topography 2422, 2424, 3999
effect on
outbreaks of insect pests 4267
susceptibility to disease 833
from tropical cyclones 2423
induced compression wood 6660
relation to thinning 3999
relation to top height 4000
relative susceptibility of species 2423, 5756
relative susceptibility of stands 5756
silvicultural measures to prevent 754, 2424, 4003, 5756
windthrow, effects of pruning 2009

Wind damage—cont.
windthrow, measurement of force required 4001
windthrown timber
insect damage 4235, 4272, 4948
protection 1009
relation to fire control 2460
salvage 663, 755, 4948
statistics p. 378 (Europe, France, Great Britain)
storage 755
Windbreaks see **Shelterbelts**
Winter injury 499, 3388, 3522
see also **Frost injury**
Wire ropes see **Cableways**
Witches' brooms 883
Wood
ageing 2992
general works and bibliographies 4501, 6246
identification 2875, 2877-8, 6398
information on particular species 2861-7, 2872, 4486-92, 4499, 4971, 6252-8, 6260-4, 6267-8
research 4971
Wood anatomy 1207, 1226-55, 2859, 2869, 2873-2925, 4501-28, 6265-6302
abnormal 4518
callus tissue 5158, 5193
cell
adjustment to spiral growth 2914, 2916
cell wall
biogenesis 6674
capillaries 4509
chemistry 6290, 6382
crystallinity 2977
deformation 6277
density 1229, 6332-3
fibril angles 1229, 6275
formation 2893
lignification 2904, 4518
measurement 2883
microfibrils 4507, 4509
middle lamella 4508
of reaction wood 4518, 6284, 6286
organization 4506
porosity 2937, 4509, 6276
secondary wall 1281
slip planes 6277
structure 2886-7, 4507
tertiary wall 4518
ultrastructure 1226, 4693, 6266, 6274-5, 6277-8, 6625; p. 202 (U.S.A.)
variation in size and thickness 1244
warty structures 1269
see also **Wood chemistry**
effects of
age 2604
aphid attack 5942
crown class 4604
disease 866, 5877
fertilizing 4605, 6416, 6674
frost 4010
fungal attack 6674
growth rate 4605
HF pollution 4022
light 4604
snow 4010
steaming 6625
effect on
gluing 6456, 6459

Wood anatomy—cont.
elements, classification of 6272
elements, proportions of 6674
evolutionary guide 2873-4
fibres
dimensions 1229, 2894, 2898, 2902, 4801, 5175, 6281, 6340
maceration technique 1228, 6265
measurement 2896-7, 6281, 6283
mechanical properties 6283
morphology 1612, 6674-5
sampling 2895
strength 4788
structure 1234, 2972, 6275
variation with position in tree 1244, 2895
fibril structure 2972
in roots of cuttings 5544
intercellular spaces 6674
lumen size and distribution 1229
of monocotyledons 2882
of tumours 6067
parenchyma 2874, 6300
pith diameter 1247
pits 1269
aspiration 4511
bordered 1235, 1292, 4510, 4512
capilliary potentials 4511
closure 1236, 1292
half-bordered 6278
membranes 1239, 2943, 4510, 6625; p. 202 (U.S.A.)
ultrastructure 2943
porous structure 2912, 4510, 4649
ray cell types 1245, 6273
ray parenchyma 2904, 6278
rays 2903, 4515, 6300
relation to
blue stain 3078
durability 6271
light 2993
permeability 2942-3, 2946, 2948, 6271
phylogeny 4503
pulping properties 6674-5, 6681
shakes 6662
silviculture 3652
site 2993
slicing properties 6664
soil moisture 2891
stem form 6414
strength properties 2965, 4638
tree class 2993
water conduction 2892
wind sway 6414
wood properties 4610
resin canals 2907, 3415
research 2858, 4531, 6271
root wood 6674
study methods 2876, 2883, 2885, 4509, 6286, 6382, 6674; p. 202 (U.S.A.)
electron microscope 1235-6, 2885, 4506, 4522, 6266, 6276-7, 6284
microscopy 1239, 4518, 4552, 6332, 6674
microtomy 1226
quantitative xylotomy 1227
radiation, ionizing 2860, 2976, 4519-20, 4579, 6275
spectrophotometry 1263-4
statistical analysis 1238
taxonomic value 210, 4503, 5207, 6269, 6270
tracheids 1239, 6379

Wood anatomy—cont.
alignment 2915
cell wall 4505, 6278
effect of photoperiod 3402
effect of water stress 4505
fibril angle 2901
genetic variation 183
measurement 2899
sampling 2899
size
measurement 6282
relation to age 2898
relation to morphological form 1885
relation to provenance 1243
relation to soil moisture 2901
variation, patterns of 2899
strength 1243
thickening of walls 2885
variation with position in tree 1242, 2900-1
tyloses 1241, 4514
variation 2884
with ecotype 6262
vessels 2893
morphology 1239
perforation 1240
water-conducting system 1245, 1289-92, 2915-6, 6272-3
xylem 1234, 2881
formation 4504, 6279
secondary 4503
see also **Cambium, Cellulose, Heartwood, Reaction wood, Rings, growth, and Species Index**
Wood cement 1618
building slabs 6702
Wood chemistry 1316-68, 2979-90, 4572-4600, 6375-6412
acetic acid 1330
acidity 1360, 4600
alcohols 1338
alkaloids 3098, 4837
alkanes 4585, 6391
arabinose 1367-8
arabinogalactans 1330-1, 6381
barbarin 1353
campesterol 4585
carbohydrates 2975, 4582
cell wall 6379-80
chromones 1355, 4596-8
coumarin 1356
dalbergin 6393
dalbergione 6393
detection by gas 1398
digestion by insects 6615
diospyrin 1347
effect of
chemical agents 6405
fertilizing 4605
light 6310, 6411
ionizing radiation 2971
seasoning 6462
storage 1342
wood borers 1524
effects on
gluing 6452-3, 6457-8, 6462
shrinkage and swelling 2939
strength properties 6353
eugenol 4584
fats 1343
fistucacidin 1353
flavonoids 2987-9, 4588
formononetin 6393
gaseous reagents 6538

Wood chemistry—cont.
hemicellulose 1368
hydrocarbons 4731
inorganic elements 3098
isodiospyrin 1347
juvabiones 1332
leucofisetinidins 1352
lignans 1340, 2984, 6398
limonoids 4595
melannein 6393
methods of analysis 1334-5, 2975
gas-liquid chromatography 4588
spectroscopy 1323
7-methyljuglone 1347
N content 6604
of reaction wood 1248
pectic substances 5855
pentosans 4581
pH 1360, 1563, 4600, 6409-10
phenols 6385-6, 6390
phenolic compounds 2974
photochemical reactions 4533
pigments 1350, 4592
podocarpic acid 4585
podototarin 4585
polysaccharides 1248, 1367, 6379-80
ptaeroxytin 6396
quinones 4533, 4590, 6388-9
reaction with metal 1360, 6404
relation to
felling season 6604
growth conditions 1317
maturity 6379-80
morphological form 1886
permeability 2943
site conditions 4575
wood anatomy 4588, 6290
research 4572
resinols 1334
resins 1336, 1343
rheim 1353
sitosterols 1347, 4585, 6396
skimmianine 6396
starch 1344
stilbenes 6310
tannins 1345
taxonomic importance 4574
terpenes and terpenoids 1333, 1335-9, 1341, 1348, 1351, 1354, 1357, 4586-7, 4594, 6394, 6397, 6732, 6746
textbook 1316, 2970
thermal effects 6399-6403
totarol 4585
3, 7, 4'-trihydroxyflavone 6387
uronic acids 1368
variation with age of tree 1330
variation with position in tree 1331, 2973
vitamin content 1521
volatile constituents 6404
waxes 1343
xanthones 1349-50, 4591, 6392
xanthoxylon 6396
xylans 2981, 4580
xylose 1368
see also **Cellulose, Chemical constituents of plants, Lignin, Resin, Wood extractives, and Species Index**

Wood dust, danger of 3117

Wood extractives 1332-58, 2982-9, 3938, 4583-98, 6383-98
corrosive volatiles 6404
effect of storage 1342

Wood extractives—cont.
effect on
cement 1366-7
concrete surfaces 6412
decay resistance 2593
disease resistance 5848
insects 1332, 2985-6
paints 6397
particle board 1603-5
permeability 4552
pulping 1343
termites 3098
water-vapour sorption 4551
wood density 2956
from stumpwood 1620
from waste wood 6748
hormone activity 1332
irritant properties 1364
methods of investigation 4583
relation to wood anatomy 1342
taxonomic value 1358
utilization 6733
variation with provenance 1603
see also **Heartwood extractives, Irritant properties of wood, Resin, Tannins, Turpentine, Wood Chemistry**

Wood flour
manual 1459

Wood identification
keys 1231-2
microscopic 1230-1, 1246
of rotten logs 1230

Wood, physical and mechanical properties 1256-1315, 1414, 2859, 2868-71, 4494, 4529-71, 4573, 4714, 5400, 6303-74
acoustic properties 4534
anistropy 4608
colour 1263-4
decayed wood 1365
effect of
delignification 2972
fertilizer treatment 4601-2
fire 4601
growth factors 4607-8, 6421
heat treatment 3105
insect attack 5942
ionizing radiation 1256
knots 1559
organic liquids 6353
silvicultural treatment 4531, 4601-2
genetic variation 1887
heartwood vs. sapwood 1365
heat of wetting 1207
inhibition of cement setting 1365
juvenile wood 6415
relation to
crown class 2993, 6419
light 2993, 6419
rotation 4601
site 2993, 6419
soil type 4610
resonance 4534
testing 1313, 1315, 6350, 6367
text book 1300
variation with age of tree 4610
variation with ecotype 6262
variation with tree habit 2930
variation within a species 2930
variation within a tree 4610
weight 1107
see also **Density, Durability, Electrical and Thermal properties**

Wood, physical and mechanical properties—cont.
Moisture, Permeability, Strength, Working properties, and Species Index

Wood quality
evaluation of 3681, 4785, 6251, 6653
relation to silviculture 3652

Wood wool 1365, 6703
building slabs 4808, 6702, 6705

Woodworking 1207, 1414, 2859, 6236
automation 4614
cancer hazard 1363
diseases, occupational 1419
effect of density 4687
effect of m.c. 4687
friction in wood cutting 4613
handbook 4612
industry, history 3181
industry, integration 1441
industry, relation to forest management 1441
machines and tools 3949, 4615, 4630, 6441-2, 6476
blunting 3013
chip escape 4629
handbook 4616
hard tipped and faced 2994, 6434
power requirements 1390
rotary cutters 4629
vibration cutting 1391
wear 6480
with inserted teeth of tungsten carbide 4616
measuring instruments 6663
noise reduction 2995, 4630
textbooks 1374
theoretical studies on cutting 1389, 1391, 4611, 4613, 4617, 4628

Work studies
barking 693-4
brush cutting 3943-4
cableways 664, 707
chain saws 3943-4
chipping 2395, 4653
cleaning 5627
cross-cutting 1386, 3942
felling 2388, 3926, 3931, 3942, 5721
floating 2385
hauling 3931
hole-digging 564
logging 691-2, 2385, 2834, 3932, 5674, 5692, 5721
methods 680, 2386, 5674
methods, PERT 5675
physiological 664, 3926, 5742
power-saws 698, 3013, 3926, 3941, 3956
preparation of pulpwood 2387-8
primary conversion 3931, 5674
pruning 2318-9
psychological aspects 2356
resin-tapping 3914-5
road-making 5750
sampling 5682
sawmilling 3009, 3041, 6502
silviculture 5682
skidding 715, 2402, 2404, 2407-8, 3931, 4436, 5721
thinning 2382, 3957
timber harvesting 3940
tractor skidding 5742
transport 2410
trimming 699-700, 2388-9
use in costing 2389, 5682

Work studies — cont.
weeding 3845
Working plans
for school forests 1165
for nature reserves 1165
text book 1166
Working properties of wood 1300, 1389
Wound(s)
healing 2905
see also **Pruning wounds**

X-Rays see **Radiation, ionizing**

Yeasts 1619, 4825
fodder 4824
Yield 4373, 6037, 6145
coppice 4401
economic indices 2829
effect of
disease 2498-9
Yield — cont.
spacing 2262
soil depth 3286
enriched natural forest 5600
financial 2137, 4374
forecasting 2741, 5600, 6164
intermediate 6163
models 6164
mountain forests 1171
plantations vs. natural forest 6144, 6146
productivity classes 2746, 2829, 6132
regulation 1162, 2829, 4420, 4424, 4908, 6185-9, 6781; p. 378 (Indonesia)
area 4421, 6190
computer programme for 4422
integral method 4423
méthode du contrôle 4419
models 2812-3, 6164, 6188
relation to
altitude 3649
Yield — cont.
climatic instability 3649
site quality 2741, 2829, 3830
species 2137
stand structure 1139, 2808, 3649
temperature 2741
vegetation type 1136
sample plots vs. whole stands 4395
savanna woodlands 4376
tables and their construction 1079-81, 1121, 1130-8, 2689, 2780-1, 4316, 4393, 4396-4401, 5400, 5578, 6094, 6163
assortment 1136
inaccuracies 1130
regional 6150
theoretical studies 1117, 1130, 6164
uneven-aged stands 6164
value 1136
see also **Increment, and Species Index**

GEOGRAPHICAL INDEX

Afghanistan
Poplar growing 5406
Africa
exotics 2555
forest diseases 2498, 2555
forest resources 2844
land use assessment 4924
savanna development 6851
termites 3325
timber trade 2844
timbers 1214, 4497
wildlife 3338, 6808
Africa, Central
forest products 3919
tree breeding 3404
water conservation 3314
Africa, East
flora 3460
forest research 4944
forests and forestry 6802
timbers 6267
water conservation 3314
weeds and weed control 5794
Africa, North
afforestation 5595
Africa, southern
flora 198
see also South Africa, Republic of
Africa, Southwest
flora 1912, 5203
Africa, tropical
forest savanna margins 347
silviculture and land use 3608
timber trade 6225
water balances 3608
Africa, West
climatic data 22
forest types 372
Albania
insects 5048
Algeria
afforestation 1795, 5595
insects 2639
soil conservation 1795
America
land use 4921
America, Latin
flora 3462
America, North
forest diseases 2558
forest fire control 2457
insects 5815, 5987
logging manual 2355
timber supply and demand 4459
vegetation types 2096
Andaman Is.
soils 1757
Angola
Eucalypt plantations 5445
exotics 3230
forest products research programme 3230
oil-producing trees 6769
Argentina
aerial sowing trials 3803
afforestation 3829
ethnobotany 1624, 1652
exotics 2857, 5464-5, 5571
forest industries 2857
forest products 4845
insects 995
national parks 6811
plantation 608
sawmill industry 6221
silvicultural research 5413
Argentina—cont.
subantarctic forests 5413
timber grading 6221
vegetation types 379
Willow clones 465
wood preservation industry 4692
Asia
forest diseases 2499
timber supply and demand 4458
Asia, south-east
vegetation types 3633
Australia
chip production for export p. 201
exotic plantations 3552
financing softwood planting 4447
flora 236
forest diseases 5818
forest fire-fighting vehicles 5789
forestry statistics 4890
forests and forestry 4889
insects 2664
particle board industry 4477
sawmilling 4669
timber trade 2156, 2853
tree breeding 5157
vegetation types 381, 2105
waste wood utilization 6535-6
New South Wales
fertilization, aerial 594
forest types 3647
forests and forestry 4894
Queensland
exotics 3419
forests and forestry 4893
plantations 3661
rain forest 359, 3657
synecology 359
timber preservation practices 6554
vegetation types 382-3, 5398
South Australia
forest diseases 828
forest history 6244
forests and forest industries 3662, 6244
forests and forestry 4892
Tasmania
forest fires 4036, 4043
forests and forestry 4896
insects 6043
Victoria
catchment management 1793
exotics 4928
forest fires 4034
forests and forestry 4895
insects 6043
land use 4034, 4928
Western Australia
exotics 3528
forests and forestry 4891
prescribed burning 4053
pulpwood species 3139
Austria
cableways 709
conferences 1189
farm woodlands 1170, 4899
forest diseases 4121
forest economics 1189, 2835, 2838
forest history 4848, 4898
forest survey 3194
forestry education 3222-3
forestry prospects 4445
integration in forest industries 4468
management principles 6175
Austria—cont.
nature reserve 3664
soils 3288
vegetation types 2074

Belgium
exotics 4793
forest fire insurance p. 569
forest policy 3176
forests and forestry 4858
game management 5057
insects 942
new serial 1729
pulpwood species 4793
Bolivia
enumeration surveys 4883
forest policy 4883
vegetation types 4883
Brazil
afforestation 423
choice of species 5463
climatic data 32
forest associations p. 569
forest inventory 2722
forest policy 1099
forest survey 1098
forests and forestry 1666, 4882
insects 3327
national parks 6811
native, pioneer species 423
plantation 440; p. 782
soils 32
tannin industry 5657
timbers 4489
vegetation types 377, 3645
British Commonwealth
forest products research 6247
forestry conferences 3216
forestry organization 3216
British Guiana see **Guyana**
Brunei
flora 5218
forests and forestry 4884
Bulgaria
accidents in logging 666
forest management 365, 5370
Spruce forests 4415
vegetation types 5370
Burundi
flora 3460, 5202

Cambodia
bioclimates 3259
forests and forest fires 5778
pulping properties of wood 1576
timbers 1383, 1576, 6588
Cameroun
exotic Pines 2148
vegetation types 373
Canada
aerial volume tables 2803
fertilizing, review of 593
forest fires, control etc. 2445, 2456, 4040, 5776, 5779
forest flora 3461
Forest Insect and Disease Survey 4077
forest statistics 4461
forestry education & training 3225, 4940
forestry maps 1733
forestry publications 1725
forests and forestry 4877

Canada—cont.
insects 5815, 5920
integration in forest industries 4468
land capability classification 3247, 4977
land use 4925
logging 3984
management of private woodlands 2818
marketing 4459
new serial 1731
ornamental trees 3518, 5655
particle board industry 4476
quarantine regulations 3997
regeneration 408
research 3, 391, 3650, 4945
skidding studies 703
vegetation types 5392
Alberta
insects 1004
British Columbia
forest products research institute p. 378
forestry research 4946
fungi 6584
insects 4207, 4236
marine-piling symposium 6496
pollen census 3249
pulpwood marketing 4462
tree breeding 3425
Labrador
flora 195
New Brunswick
forestry education 3227
Newfoundland
flora 195
Nova Scotia
insects 974
palaeoecology 334
Ontario
forests and forestry 4878
silviculture 5412
Pacific N.W.
wages 6849
Quebec
forest types 3514
forestry education 3226, 4941
new serials 3241-2
vegetation types 2097-8, 3638-9
Saskatchewan
productivity of forests 3198

Canary Is.
marine fungi 1508
timbers 4486

Ceylon
forests and forestry 4864
pulpwood species 436, 1571
timbers 1299

Chile
afforestation 3829, 4929
exotics 2559
forestry textbook 4959
fungi 2559, 5817
increment and yield 2759
land use 4929
vegetation types 2759
wood preservation 6551
wood properties 6341
wooden houses 1440

China
forest history 4852

Colombia
catchment areas 1794
diseases 4081

Colombia—cont.
forest map 378
water transport in swamp forest 2419

Congolese Republic
enrichment of tropical forest 5601
flora 3460, 5202
soil maps 5012
timbers, N. Kasai 6256
vegetation maps 5012

Costa Rica
flora 5225
phenology 2027-8
vegetation types 376, 2027

Cuba
National Institute for Forest Development and Use 6825
timbers 2865

Cyprus
forests and forestry 4862

Czechoslovakia
bibliographies 4963-4, 6246
exotics 425-6, 2139, 3685-6
forest diseases 2517
forest fires 778, 4031
forest history 1657, 3179
forest types 238
land use 6193
maps 2068
new serial 10
palæoecology 2068
plantations on spoil mounds 575
provenance trials 2163, 2166
silviculture 392, 1139
soils 29, 5006-7
vegetation types 332, 363, 392, 2076, 5006-7

Denmark
afforestation 5584
forest economics 2835, 4446
forest law 4921

Dominica
logging and sawmilling p. 569

Ecuador
forest law 3215

Egypt
vegetation types 3632

Eire see **Ireland**

Ethiopia
forestry and forest industries 4868
timbers 2864

Europe
consumption of tropical timbers 6224
cost studies 2837
drainage of peatlands 588
marketing 4456
quarantine regulations 2421
timber statistics 2837

Europe, Central
forest types 2082
silviculture 2106-8
small wood disposal 2108

Europe, Western
land use 4921

Fiji
borers 6611, 6621
exotics 3706
forests and forestry 4886
new serial 4971
timbers 4971, 6258-9, 6319, 6589, 6659
bibliographies 4, 1734
ecological studies 3530
floating timber 732
forest economics 2835
forest ownership 4935, 6823
forest policy 1674, 4420
forest reserves 6789
forest statistics 1672-5
forest taxation 6846
forestry research 3228, 4952
forests and forestry 4908
insects 5983
labour 2386, 3231
logging 2832, 3930
plastics industry 6738
pollution of lakes 3129
private forestry p. 782
small forests 1676
timber grading 3128, 4786
timber production 1675
timber research 1674
wood properties (latitudinal variations) 2954
yield regulation 4420

Formosa
forest history 4852
forest pathology 4080
insects 905, 5049
plywood manufacture 3046
pulpwood species 2895

France
associations of forest owners 4935
exotics 448, 5452
flora 240
forest administration 1661, 6213
forest dictionaries & glossaries 1, 3235
forest fire control measures 788
forest history 4848, 6213, 6773
forest law 1656, 6826
forest maps 1733
forest surveys 3195-6
forest types 5349
forests and forestry 1662, 5348
insects 2646, 4187
integration in forest industries 4468
logging 6826
new serials 9, 3239
Poplar growing 606
provenance trials 447, 2160-1
pulp and paper industry 3133
regeneration 406
silviculture in the Landes 2112
timbers (Oak) 2870
vegetation types 360, 2084, 3626
yield tables 1134-5

French Guiana
nomenclature of trees and timbers 3463

Gabon
forest savanna margins 348
logging 712, 3985

Germany
forest fire control 2457
forest history 1655, 3178, 4848
forest types 362
glossary 1720
insects 4173
mice and voles 888
mites 4173
small wood utilization 2109

Germany, East
afforestation of spoil mounds 574
forest administration 6214
forest fire control training 785
forest statistics 3193
forest surveys 6143
fungi 4110
insects 4265
nature reserves 1687
soils 33
tree breeding 5145

Germany, West
distribution of tree species 6787
forest administration 6214
forest census 1668
forest economics 2835
forest history 3177, 6774, 6786
forest statistics 4897, 6786-7
forests and forestry 1699
forestry education 1710, 3221
Hann. Münden centenary 6832
hunting 78
integration in forest industries 4468
management principles 6175
mechanization 3928
mining timber 1200
municipal forests 4932-3
particle board industry 6245
Poplar inventories 6788
private forestry 6215
seed certification 5503
soils 3287
subsidies for forestry 3928
timber trade 1199
valuation for taxation 6205
wood-consuming industries 6232

Ghana
Forest Products Research Institute 1722
forests and forestry 4867
insects 2621
metal corrosive timbers 1360
timber trade 1201

Great Britain
afforestation 424
and E.E.C. 4464
arboreta 3903
atmospheric pollution 2434
deer 5916
farm woodlands 2820
forest economics 2835
forest history 3609, 4848
forest law 1700, 4934
forest policy 1166, 4464
forest products research 2858
forestry education 1714, 3220, 4949
forestry finance 2839
forests and forestry 4857
fungi 2520, 2554
hydrological research 1783
landscape, forestry and recreation 4909-10
management 4418, 6175
marketing 4465, 6231
mechanization of logging etc. 708
national parks etc. 4914
nature conservation 1686, 2077
nursery research 502
pulp (mechanical) 4790
pulp and paper industry 6677
pulpwood species 4790
regeneration, natural 386
research institutes 4949, 4951
safety regulations 3927
seed research 5484

Great Britain—cont.
silviculture 388
soils 1754
species trials 3683
thinning handbook 611
timber grading 6671
timber trade 1202, 6229
timbers 231, 4493-4
tree preservation order 1686
vegetation types 5237
wages 1718
weed control 2477
wildlife 3333
work studies 3940
yield tables 4392
Scotland
deer 1808
palaeoecology 330
provenance trials 2162
soils 1754
tree line 2073
vegetation 1754

Greece
Beech forests 212
demonstration forest 3219
forest rights 6827
hydrological research 63
insects 2595, 5943
logging 3929
reforestation 3207
silviculture 2110
small wood disposal 2110
soils 3288
tourism 3207

Guatemala
forestry maps 1733

Guyana
choice of species 3704

Honduras
forest fires 2460
forest survey 4324
forestry maps 1733
forests and forestry 4879
hurricanes 4004

Hungary
barking 5703
conifers 5400
exotics 3688
forest history 3182
forest statistics 1669
hardwoods 3136
insects 4220
new serials 4966-7
plantations 5404
Poplar inventory 1670
pulpwood species 3136
vegetation types 5341

Iberian Peninsula
subalpine forest flora 361

Iceland
afforestation 3834
climate 3257
exotics 3834
forests and forestry 6779
grazing in forests 2331

India
afforestation 4923, 5593-4
ancient timbers 1372
bioclimates 3258
conversion 6185
erosion 3318

India—cont.
Eucalyptus trials in arid areas 2145
exotics 1937, 4923, 5594
fast growing species for 5447-8
fertilizing 5615
forest economics 6211
forest-based industries 6242
forest products research 6248
forest reserves 3337
forest types 3656
forestry research 6838
forestry training 670
forests and forestry 4863
fungi 2500, 6594
glossaries 1721
indigenous vs. exotic species 5447
land use 4922-3 6817
logging and transport 2365
management 3656, 5408-9, 6185
mechanization of logging 5687, 5723
meteorological data 3318
new serial 1730
palaeoecology 3613
plywood 1426-7
Poplar growing 5479
pulp and paper industry 1570
railway sleeper supply 6501
seeds (exchange) 5502
silvicultural conference 6844
soils 5592
termites 1797, 5047
timber vs. fuel production 6212
timbers 2863, 2880
transport of pulpwood 5722
tropical timber properties 1279
vegetation types 2089-91, 3634, 5408-9
water conservation 6817
wildlife 3337
Assam
forestry 6782
Bihar
forest statistics 3197
Madhya Pradesh
forest administration 4448
demarcation of reserved forests 4931
Madras
vegetation types 5381
Mysore
exotics 2146
forest types 3635
plantations 2147

Indonesia
timbers 1359, 6261

Iran
conversion 2114
forest types 3654
Poplar growing 5406
timbers 4485
vegetation types 333, 2114

Iraq
forests 4861
insects 901
new serial 11
Poplar growing 5406

Ireland
drainage for afforestation 589
forest history 4849
forestry research 2
forests and forestry 4849
Kennedy Memorial Park p. 202

Israel
afforestation 2144

Israel—cont.
dendrochronology 6157
insects 2596
pollen of trees and shrubs 3392
Poplar growing 5406
vegetation 5370
Italy
afforestation 233
amenity forests 1689
choice of species 1939, 3651
coppice management 2115
degraded sites 1939
erosion control 66
exotics 4856
flood control 66
forest policy 4860
forests and forestry 3455
insects 1689, 2593
management 4860
National Eucalyptus Day p. 378
national parks 6809
nurseries and nursery practice 2198, 5515
plantation proposals 4856
plantations in Calabria 5583
Poplar growing 5515, 5624
volume tables 4315
Sardinia
vegetation types 5350

Jamaica
forests & forestry 4880
fungi 5816
Japan
afforestation 5590
erosion control 5590
experimental forests 5456-7
forest economics 2835
forest history 4842
forest policy 1658
forest types 5377
forestry development from 1879 to 1963, 1680
fungi 4149
hydrology 1790
insects 6008
palaeoecology 5339
private forestry 6824
recreational use of forests 3211
statistics 1658
timbers 2879
vegetation types 370-1, 5339, 5376
wood research 4563
Jordan
insects 2641
Poplar growing 5406
Jugoslavia
afforestation 5422
Beech utilization 6250
conversion 5422
exotics 2140
flora 234, 239
forest fires 4031, 5777
forest types 364, 5364, 5368
forests and forestry 3187
insects 2594
institutions 3871
management 364
marketing small wood 2111
Poplar growing 3871
shelterbelts 3898
soils 30, 5368
vegetation types 1950, 5369

Kenya
forests and forestry 6802
fungi 851
pulp and paper industry 2855
Korea
enumeration surveys 1100
forest history 4852
insects 967

Laos
bioclimates 3259
forest types 5384
Latin America see **America, Latin**
Latvia
exotics 2143
Lebanon
Poplar growing 5406
Liberia
timbers 6255
Lithuania
management 4416
sand fixation 3842
Willows 648

Madagascar
exotic Pines 2148
timbers 4488
Malawi
afforestation 3682
exotics 3405
forests and forestry 4875
marketing 2845
tree breeding 3405
wood requirements 2846
Malaya
bioclimates 3259
conversion 5415
forest resources 6796
forest statistics 4901-2
forest survey 6790-5
forest types 4901
forests and forestry 4866
management 5415
research programme 6839-41
vegetation types 3608, 5382
Malaysia
afforestation with exotics 5460
constructional timber, preservation 1482
silviculture, work studies 5682
Manchuria
forest history 4852
Mauritius
damage from cyclones 2423
forests and forestry 4876
Mexico
ecology of conifers 3500
exploitation of forests 5688
forest inventory 6171, 6799
forest research 6842
forest resources 6798
forest types 2103, 6784
forestry maps 1733
insects 5815
key to trees 5205
management 1164
Mangrove ecology 375
new serials 4970
Pines 1937
soils 4947
species trials in arid zones 4947
timber industry 6241
vegetation in arid zones 4947

Morocco
afforestation 5595-6
Cedar forest 228
rural development 6818
Mozambique
flora 1911
natural regeneration 2010
vegetation types 2010

Nepal
forest types 1663
land use and soils 3290
Netherlands
forest economics 2835
forest statistics 4900
insects 981, 2637
recreational use of forests 1690, 3203, 4919
tidal forest 2087
weed control 2478
New Britain
forests and forestry 3192
New Guinea and Papua
Bamboos 1918
forest resources 6800
forests and forestry 3192, 4885
marketing 4455
pulpwood species 4807
soils 5014
succession 5190
tree breeding 3442-3
vegetation types 384, 5190, 6800
New Zealand
accident statistics 2359
bee pasture 5673
control of weed trees 802
conversion 2118
exotics 2156, 2560
forest engineering 3989
forest industries 1678
forest protection 4078
forest statistics 1678
forests and forestry 4888
fungi 2560
insects 1024
land use 5283
Lodgepole Pine in pastures 3901
nature conservation 2104
nursery practice 3756
plantations vs. natural forests 6144
Podocarpus heartwood 4585
poles 2918
pulp and paper industry 6697
quarantine regulations 3998
soils 5283
timber trade 2853
timberlines 2075
vegetation types 380, 2074, 2104
weed control 801, 803
weedkillers 586
Newfoundland
flora 195
Nigeria
forest industries 4853
forest policy 4853
forestry research and education 4939, 6851
forests and forestry 4871, 5411
health of forest workers 5679
savanna development 6851
seed storage 3735
timbers 1219-20
tree breeding programme 3403
vegetation types 5385-6

Northern Ireland
accidents 668
exotics 5450
North Borneo see **Sabah**
Norway
associations of forest owners 4935
exotics 5453
forest economics 1172
forest law 4921
forest statistics 1171, 4393
forest survey 6099-6101
forestry research 4943
insects 4181
integration in forest industries 4468
land use 6804
mountain forests 1171-2
nature conservation 6804
provenance trials 5471
recreational use of forests 3205-6
road transport 3987
soil depth 3286
timber extraction methods 5725
timber trade and statistics 1671
yield tables 4399

Pakistan
Bamboo 5670
exotics 5459
forests and forestry 4865
tanstuffs 4831
Panama
flora 196-7
forest law 1702
Papua see **New Guinea**
Paraguay
forest resources 3190
timbers 3191
vegetation types 3191
Peru
enumeration surveys (in Amazonian forest) 4325
log transport 3979
new serial 3243
timber production and trade 4463
Philippines
forest industries 6243
forests and forestry 6243
logging 5689-90
new serial 1732
pulpwood species 1577, 1583, 6676
termites 6624
timbers 1577, 6268
Poland
bibliographies 4478
exotics 3687
forest fires 787
forest history 3180-1
forest literature 3180
forestry conference 3181
forestry maps 1755
new serial 1728
mycological research 2496
Poplar growing 2299
Spruce provenances 1885
timber trade 2849
wood preservation 1463
Portugal
Eucalyptus plantations 5407
forestry maps 1733
insects 2591-2, 6051

Republic of South Africa see **South Africa, Republic of**

Réunion
forests and forestry 1664
Rhodesia
flora 5241
Rumania
economic value of species 1183
exotics 429-30, 5431
flora 194
forest steppe 366
forest types 2080, 2088
forestry research 3229
insects 908
phenology 2065
plantations 5559
Poplars 1573, 4531
recreational use of forest 4920
sand dune plantation 578
silviculture 2113
succession 336
vegetation types 223, 366, 3630
wood-working industry 1441
Rwanda
flora 3460, 5202

Sabah
forest survey 5897
timbers 1225, 1359, 2871, 3042
vegetation types 5383
Samoa
management and sawmilling p. 782
Sarawak
cable skidding 2403
flora 5218
timbers 1383
Scandinavia
timber measurement 1105
tree breeding 146
Senegal
flora 3458
Sierra Leone
exotics 437
forests and forestry 4869
particle board project 4475
Singapore
timber trade 6237
Solomon Is.
forest types 358
forests and forestry 4887
land molluscs 3633
soil fauna 3633, 5031
South Africa, Republic of
exotics 2148
flooring timbers 1455
forest products research 4480
pulp and paper industry 4473
taxonomic studies 202
timber trade 2851
timbers 3138
vegetation types 2094, 3636, 5391
Spain
afforestation 571
ecology of Pines 3505
forest history 3185
forest ownership 6822
forest policy 3185, 6777
forestry maps 1733
insects 2590, 4233
logging 2401
timber consumption by railways 6220
timbers 2926
vegetation types 2084
Spanish Guinea
timbers 2926

Sudan
Bamboos 3786
forestry education and research 6851
forests and forest policy 4847
irrigated plantations 4847
management of drier areas 6174
nursery practice 544
particle board 4809
propagation, vegetative 3786
savanna development 6851
Surinam
regeneration, natural 2133
water transport 2419
Sweden
associations of forest owners 4935
bundle floating 3988
co-operative forests 1704
farm forestry 1173
forest grazing 3614
forest law 4855, 4921
forest policy 4855
forest products exports 4457
forest surveys 1097
forest taxation 1717
forestry research 389
integration in forest industries 4468
labour 3232-3, 6848
land use 6805
logging 2391
management 4859
marketing 1196, 4859
Oxford Decimal Classification 14
private forestry 4921
provenance trials 2167
seed 481, 5485
thinning research 2307
timber harvesting 4859
vegetation types 3614
volume tables 1091
Lappland
forest history and policy 4850
Switzerland
forest economics 1190
forest history 3183-4, 6775
forest law and policy 4854
fuel wood utilization 1415
gale damage 3999, 5757
insects 2636
integration in forest industries 4468
nature reserve 3624

Taiwan see **Formosa**
Tanzania
forests and forestry 4873, 6802
thinning softwoods 5629
Thailand
Bamboos 1917
bioclimates 3259
timbers 6587
wildlife 80
Togo
wildlife 3340
Trinidad
conservation 6807
forests and forestry 4881
Tunisia
afforestation 5595
fodder species 5648
forest law 1701
insects 988
ornamental trees 640
shelterbelts 639

Turkey
aerial surveys 4406
afforestation 3844
demarcation and registration of forests 4930
enumeration methods 4323
forest fire control 792
forest map 2074
forests and forestry 3189
insects 3330, 4188
land use 1698
palæoecology 3612
provenance trials 3713-4
seed supplies 3730
soils 3274
utilization of small wood 3655
wildlife 3336

Uganda
forests and forestry 4872, 6802
species and provenance trials 2150-4, 3698-3702, 5461-2
timber users' handbook 6257
utilization of native species 6249
vegetation types 5387

Uruguay
forestry education and training 1713
pulp and paper industry 4474

U.S.A.
bark production 4829
bibliographies 5, 5216
chemical utilization of wood 1568
diseases 2550, 4076
forest development 4848
forest economics 1157
forest fire detection 2462
forest resources 4458
forest statistics 1659, 4904
forest types 3641
forest valuation 2827, 4434
forestry education and training 6835
forests and forestry 6783
hunting 78
hydrological research 64, 1792
insects 936, 949, 952, 5815, 6023
land use 1697, 6821
marketing 4459
mensuration research 2687
multiple use of forests 1659, 3208
national parks 1682-4
new serial 4968
plywood production from softwoods 6238
pulp and paper industry 4460
recreational use of forests 1692, 1694
termites 1796
timber trade 2852
tree farms 3214
vegetation types 352, 2100, 3637, 3644
wood preservation 6541
Alaska
aerial surveys 1145
forest statistics 4905
forest types 1145
forestry maps 1733
insects 902
logging and salmon production 1814, 5062
vegetation types 374
Arizona
catchment area management 59

U.S.A.— cont.
California
flora 5204
forest fires 780
forest types 5204
fungi 845
Pine forests 229
vegetation types 5394
Colorado
range management 2332
Florida
theses 3236
vegetation types 3642
Georgia
forests and forest statistics 4907
Hawaii
control of weed trees 810
land use 5399
plantations 2157, 3707
termites 1532
vegetation 5399
wood durability 1532
wood moisture content 4544
Illinois
vegetation types 2191
Lake States
forest ecology 5346
Louisiana
recreational use of private forests 3209
Maryland
forest statistics 4903
Michigan
new serial 12
veneer and plywood industry 4470
Minnesota
vegetation types 3640
Mississippi
management 2298, 5045
new serial 4969
Montana
regeneration 5436
New Jersey
shrub and herb continua 355
vegetation types 3484
Ohio
distribution of Eastern Red-Cedar 5242
Oklahoma
soils and vegetation types 3643
Oregon
sand dune ecology 344
timber measurement 6075
Tennessee
farm forestry 1175
Texas
forest statistics 6797
Virginia
timber resources 3199
water conservation 59
Washington
atmospheric pollution 2472
slash disposal 2472
timber measurement 6075
West Virginia
Poplar growing 6340
Wisconsin
veneer and plywood industry 4470

U.S.S.R.
abstract journal 1727
afforestation 637
aircraft, use in forestry 1195
birds and mammals 71
bogs 367

U.S.S.R.— cont.
damage to forests 1703
documentation 1727
drainage 591
economics of forest industry 4435
exotics 432-3, 2141
financing 1192
foliage utilization 1635
forest administration 1169
forest developments 4848
forest fire damage 793
forest houses 2413
forest industry 1203-4
forest policy 1677, 3186
forest products 1414
forest steppe 367, 4851
forest types 353, 3631, 5873
forestry education 3224, 4953
forests and forestry 3187, 6780-1
fruits 5144
hydroelectric reservoirs 6820
illegal felling 1703
insects 903, 1043
integration in forest industries 4468
irrigated plantation 420
logging 690, 692, 5724
management 1161
mechanization of forest operations 3665, 5724
medicinal plants 6753
mites 4287
new serial 3240
ornamental trees and shrubs 5654
palaeoecology 2069-70, 3611, 5336-8
peatland afforestation 3836
phenology 2141
phytopathology 5814
plywood industry 1425
Poplar growing 605
regeneration 339
resin-tapping 655
seed 3584, 5144
shelterbelts 637, 642, 647, 2323, 4851, 5000, 6781
silviculture 394, 398
soils 31
suburban forests 4915
succession 339, 2071
termites 921
timber prices 6226
tractors 723, 5740
tree breeding 145, 479, 1900
vegetation types 368-9, 2071, 2085-6, 2092, 3186, 5337-8
veneer 1425
waste wood utilization 1402
water conservation 6820
weed control 799
Crimea
forests and soils 3289
Estonia
Poplars 5405
Georgia
fungi 2554
insects 4175
Karelia
exotics 3690
Maritime Province
forest ecology 5375
Moldavia
forest types 5371
Sakhalin
forest history 4852
Siberia
afforestation 419

U.S.S.R. — cont.
forest history 4852
Ukraine
forest types 5372
insects 938

Venezuela
afforestation 2155
forest policy 1660, 6778

Venezuela — cont.
research 6843
soils 5013
surveys 3213
waste wood utilization 4808
wood industry 6240

Vietnam
bioclimates 3259
soils 3291

Zambia
forest products research 4479
forests and forestry 4874
marketing 4454
miombo 4376
timbers 4498
vegetation types 2095
volume tables 6095